```
? logon

*** It is now 2010/01/21 14:13:11 ***
 (Dialog time 2010/01/21 14:13:11)

COREFT is set ON as an alias for
15,9,610,810,275,476,624,621,636,613,813,16,160,634,148,20
CORENFT is set ON as an alias for 35,583,65,2,474,475,99

? B
637,15,9,610,810,275,476,624,621,636,613,813,16,160,634,148,20,35,583,65,2,474,475,99,256

>>>         476 does not exist
>>>1 of the specified files is not available
       21jan10 14:14:54 User291721 Session D3.1
            $0.00    0.879 DialUnits File415
     $0.00  Estimated cost File415
     $0.54  INTERNET
     $0.54  Estimated cost this search
     $0.56  Estimated total session cost   0.879 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File 637:Journal of Commerce 1986-2010/Jan
         (c) 2010 UBM Global Trade
  File  15:ABI/Inform(R) 1971-2010/Jan 20
         (c) 2010 ProQuest Info&Learning
  File   9:Business & Industry(R) Jul/1994-2010/Jan 20
         (c) 2010 Gale/Cengage
  File 610:Business Wire 1999-2010/Jan 20
         (c) 2010 Business Wire.
*File 610: contains data from 3/99 forward.
 For archive data (1986-2/99) see File 810.
  File 810:Business Wire 1986-1999/Feb 28
         (c) 1999 Business Wire
*File 810: contains data from 1986-1999.
 See File 610 for current data.
  File 275:Gale Group Computer DB(TM) 1983-2010/Dec 15
         (c) 2010 Gale/Cengage
  File 624:McGraw-Hill Publications 1985-2010/Jan 20
         (c) 2010 McGraw-Hill Co. Inc
  File 621:Gale Group New Prod.Annou.(R) 1985-2010/Dec 07
         (c) 2010 Gale/Cengage
  File 636:Gale Group Newsletter DB(TM) 1987-2010/Dec 21
         (c) 2010 Gale/Cengage
  File 613:PR Newswire 1999-2010/Jan 21
         (c) 2010 PR Newswire Association Inc
*File 613: File 613 now contains data from 5/99 forward.
Archive data (1987-4/99) is available in File 813.
  File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
*File 813: contains data from 1987-1999.
For current data see File 613.
  File  16:Gale Group PROMT(R) 1990-2010/Jan 21
```

```
         (c) 2010 Gale/Cengage
  File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
  File 634:San Jose Mercury  Jun 1985-2010/Jan 20
         (c) 2010 San Jose Mercury News
  File 148:Gale Group Trade & Industry DB 1976-2010/Jan 20
         (c) 2010 Gale/Cengage
*File 148: CURRENT feature not working. See HELP NEWS148.
  File  20:Dialog Global Reporter 1997-2010/Jan 21
         (c) 2010 Dialog
  File  35:Dissertation Abs Online 1861-2009/Nov
         (c) 2009 ProQuest Info&Learning
  File 583:Gale Group Globalbase(TM) 1986-2002/Dec 13
         (c) 2002 Gale/Cengage
*File 583: This file is no longer updating as of 12-13-2002.
  File  65:Inside Conferences 1993-2010/Jan 21
         (c) 2010 BLDSC all rts. reserv.
  File   2:INSPEC 1898-2010/Jan W2
         (c) 2010 The IET
*File   2: IPC codes have been added to the file. See HELP NEWS 2
for details.
  File 474:New York Times Abs 1969-2010/Jan 11
         (c) 2010 The New York Times
  File 475:Wall Street Journal Abs 1973-2010/Jan 21
         (c) 2010 The New York Times
  File  99:Wilson Appl. Sci & Tech Abs 1983-2010/Dec
         (c) 2010 The HW Wilson Co.
  File 256:TecTrends 1982-2010/Jan W3
         (c) 2010 Info.Sources Inc. All rights res.
*File 256: Please see HELP NEWS 256 for the latest
information about TecTrends.

      Set  Items  Description
      ---  -----  -----------

? s (rural or urban)(9n)deliver???

Processing
Processing
Processing
Processing
Processed  10 of  24 files ...
Completed processing all files
         1794076  RURAL
         2094524  URBAN
        14430819  DELIVER???
      S1   37327  (RURAL OR URBAN)(9N)DELIVER???

? s (second??? or another or subsequent??)(3n)(carrier or shipper)

Processing
Processing
Processing
Processing
Processing
```

```
Processing
Processing
Processed  10 of  24 files ...
Processing
Processing
Processed  20 of  24 files ...
Completed processing all files
        20919004  SECOND???
        15914569  ANOTHER
         2700014  SUBSEQUENT??
         2311887  CARRIER
           87928  SHIPPER
      S2   80873  (SECOND??? OR ANOTHER OR SUBSEQUENT??)(3N)(CARRIER OR
                  SHIPPER)

? s s2(9n)(label???? or tag???? or sticker or affix????)

Processing
           80873  S2
         2423699  LABEL????
         1190064  TAG????
           87436  STICKER
           48604  AFFIX????
      S3      73  S2(9N)(LABEL???? OR TAG???? OR STICKER OR AFFIX????)

? s s1 and s3

           37327  S1
              73  S3
      S4       0  S1 AND S3

? s s2 and (rural or urban or hand??? or hand-off)

Processing
Processing
Processing
Processing
Processed  10 of  24 files ...
Completed processing all files
           80873  S2
         1794076  RURAL
         2094524  URBAN
        14132389  HAND???
              45  HAND-OFF
      S5   18447  S2 AND (RURAL OR URBAN OR HAND??? OR HAND-OFF)

? s s3 and (rural or urban or hand??? or hand-off or handoff)

Processing
Processing
Processed  10 of  24 files ...
Processing
Completed processing all files
              73  S3
```

```
         1794076  RURAL
         2094524  URBAN
        14132389  HAND???
              45  HAND-OFF
           22483  HANDOFF
      S6       24  S3 AND (RURAL OR URBAN OR HAND??? OR HAND-OFF OR HANDOFF)

>>> Retrying request [1]
? s s6 not py>=2004

Processing
Processing
Processing
Processing
Processing
Processing
Processing
Processing
Processed  10 of  24 files ...
Processing
Processed  20 of  24 files ...
Completed processing all files
              24  S6
        71128003  PY>=2004
      S7       13  S6 NOT PY>=2004

? rd

      S8       11  RD  (unique items)

? t s8/full,k/all

Dialog eLink:
8/K/1 (Item 1 from file: 15)
DIALOG(R)File 15: ABI/Inform(R)
(c) 2010 ProQuest Info&Learning. All rights reserved.

01759773             04-10764
Pfizer's prescription for fulfillment

Thomas, Jim
Logistics Management & Distribution Report   v38n1  pp: 40-43
Jan 1999
ISSN: 1098-7355  Journal Code: LMDR
Document Type: Journal article  Language: English  Length: 3 Pages
Word Count: 1445

Abstract: When Pfizer launched Viagra in 1998, it used its expertise to accelerate
the typical approval-to-market cycle time of three to four weeks.  Once
Pfizer received the final OK from the FDA in late March, the pharmaceutical
giant packaged Viagra and shipped it through a distribution network that
included manufacturing sites, Pfizer's logistics center, wholesaler DCs,
retailer DCs, and ultimately, retail pharmacies in only 10 days.  Even for
a logistics department as sophisticated as Pfizer's, that was no small
feat.  To expedite the cycle, Pfizer prepared shipments of Viagra before it
ever received the product in its logistics center.  Customer service used
```

the company's software system, called R.C.S. to create a template to build orders with weights included. Once the logistics center received this information, it ran the data through FedEx software. The software checked order ZIP codes for accuracy and produced labels. Pfizer than printed labels and gave then to FedEx. FedEx prepared batches and sent the labels back to Pfizer.

Text: Headnote:

Pfizer's logistics department is staking a claim as the best in handling order fulfillment. After all, it moved more than 9,000 shipments of Viagra to retail outlets in a mere 10 days.

You undoubtedly have heard of Viagra, but do you know the logistics story behind the much-lauded pill? When Pfizer Inc. launched the male impotence treatment earlier this year, it used its expertise to accelerate the typical approval-to-market cycle time of three to four weeks. Once Pfizer received the final OK from the Food and Drug Administration in late March, the pharmaceutical giant packaged Viagra and shipped it through a distribution network that included manufacturing sites, Pfizer's logistics center, wholesaler DCs, retailer DCs, and ultimately, retail pharmacies in only 10 days.

Even for a logistics department as sophisticated as Pfizer's, that was no small feat. "It required a lot of innovation," says Oscar Perez, Pfizer's manager of national customer service. "We're not talking about moving a couple hundred shipments; it was in excess of 9,000."
To expedite the cycle, Pfizer prepared shipments of Viagra before it ever received the product in its logistics center. Customer service used the company's software system, called R.C.S. (for Revenue Cycle System), to create a template to build orders with weights included. Once the logistics center received this information, it ran the data through FedEx software. The software checked order ZIP codes for accuracy and produced labels. Pfizer then printed labels and gave them to FedEx. FedEx prepared batches and sent the labels back to Pfizer. "Normally, you would not take any of these steps until you had the product in hand," notes Phil Rose, logistics center manager.

Once the distribution group received the Viagra, it packaged and prepared the orders. As part of its plan, Pfizer shipped the orders directly to the FedEx Memphis facility earlier than the normal night shift, which minimized the burden on the carrier's distribution infrastructure.

In recognition of this overall distribution achievement, the National Wholesale Druggists' Association presented Pfizer with the DIANA award for the best new-- product introduction. Yet that kind of recognition is the exception, not the rule, for Pfizer's logistics operations. "We're like a lot of other companies," says J. Don Witherspoon, director of logistics. "When you think about Pfizer, logistics is not the first thing that comes to mind."
Perez agrees. "Pfizer is recognized as a leader because our R&D and marketing departments are second to none," he says. "But in the absence of a quality logistics operation, the best R&D and marketing still can't deliver the goods. Our mission is to fully complement and support our other

core competencies, while leveraging our network to its fullest capabilities."

The Challenge of Success

That logistics mission has become more challenging than ever in recent years. Pfizer has launched 12 major new pharmaceutical products in the past decade, and the company's portfolio includes 60 drugs in the development pipeline.

In addition, Pfizer recently partnered with Warner-Lambert to launch the cholesterol-lowering medicine Lipitor, which broke industry records for first-year sales. The company also established partnerships with G.D. Searle and Japan's Eisai.

On top of this, Chairman and CEO William C. Steere Jr. recently announced that he envisioned Pfizer becoming the world's premier pharmaceutical company. That means the primary challenge for Pfizer's logistics operation is to stay a step ahead of some of the industry's rosiest forecasts, says Richard E. Nelson, vice president, distribution and transportation services division.

"We have to identify the infrastructure that will support unprecedented growth," Nelson says. "It's a network that differs in concept from the one we had in place several years ago." In 1995, he explains, Pfizer's strategy called for improving efficiency through consolidation. The company combined its Atlanta, Chicago, and Dallas operations into a 280,000 square-foot site in Memphis, Tenn., a site efficient enough to double productivity in less than half the space of the facilities it replaced.

Today, with a focus on growth, Pfizer is expanding its Memphis site to encompass 53,000 square feet of office space and 400,000 square feet of physical distribution space. The Memphis site also houses the headquarters of Pfizer's distribution and transportation division, national customer-service operations for pharmaceuticals and consumer health care, and "backroom functions" such as accounts payable, general ledger, and the accounting and control groups.

The Memphis logistics center now moves products for Pfizer's pharmaceutical and consumer health divisions. "In the three years since we opened Memphis, the total dollar value of goods moving through the facility has grown from $2.4 billion to $4.2 billion a year," says Nelson. "Product literature has gone from 800,000 lines to three million. Without our distribution infrastructure, I doubt that we could have handled such an increase in business. If we couldn't handle the increases while improving the level of service, we wouldn't have been doing our job."

Built for Speed

To ensure high product throughput, the Memphis site features two three-level order-fulfillment mezzanines, Nelson says. "The mezzanines are critical because we focus on physical distribution, not storage," he notes. "Storage is not a value-added activity, order fulfillment is."

The mezzanine system takes advantage of the facility's 40-foot-- high

ceilings, says Nelson. Each floor of the mezzanines measures about 20,400 square feet and operates with a variety of materials-handling equipment, including hightech carousels, radio-frequency terminals, pick-to-light and pick-- to-label stations, and weigh--motion scales. "The variety of equipment is necessary because we have quite an assortment of products, all of which require different levels of security and types of handling," says Rose.

For example, Pfizer uses pick-tolight technology for its pharmaceutical products, where 100-percent accuracy is required. The pick-tolight system uses a 16-digit display, double the standard display, to accommodate a product's entire lot number. In the case of product literature, where the goal is to maxi- mize throughput, products pass over weigh-in-motion scales. Pfizer traditionally affixed two labels to literature shipments-one label with shipper information and another with carrier information. Pfizer streamlined the literature-- fulfillment process by combining its label information with United Parcel Service's label information to produce only one.

Pfizer gains further efficiencies because orders from each mezzanine travel to a single merge system, rather than to separate systems. Rose says the company is so pleased with the Memphis operations that it plans to build two additional centers-one in Parsippany, N.J., and another to serve the West Coast. The company also is building a third mezzanine in the Memphis logistics center.

High-Tech Applications

Pfizer uses the latest logistics technology in its transportation operation as well. The company has automated its freight-payment system completely, so that once an order is shipped, a file is transmitted to accounts payable. "There is no freight bill; we just cut a check," says Witherspoon. "Because we rate and pay through our system, we do the audits. The process is transparent to our vendors."

Pfizer also has reduced paper on the customer side. "We are the first, and I believe only, pharmaceutical company that uses EDI (electronic data interchange) for 100 percent of its orders," says Nelson. "We even have set up Internet EDI capabilities for our smaller customers."

Pfizer uses EDI to become proactive with customer shipment information. The company's R.C.S. order-management system receives carriers' shipment-status messages, says Witherspoon. "It automatically announces any service exceptions to the customer," he reports, "so we don't have customers calling and asking, 'Where is my shipment?"'

Pfizer continually measures its order-fulfillment process in terms of the perfect order, one that meets high standards in fill rate, cycle time, and accuracy. The company measures these components from the customer perspective, says Perez. "A split order is not a perfect order," he explains. "We get dinged on that, even if the order arrives on time, because the customer has to compare two shipments against a single purchase order."

Ready for Anything

The Pfizer logistics team has built an operation that meets the pharmaceutical industry's standard for three- to four-day order-fulfillment cycles. But those are today's standards, says Nelson, and they may not be applicable in the future. "Today most products are shipped to wholesalers, but we don't know where our customer base might come from tomorrow, nor what the marketplace dynamics may be in terms of service requirements," he says. "Conceivably, we could ship to retailers or even directly to customers."

That uncertainty may be the prescription for Pfizer's success. "We continue to examine how to improve our product velocity," says Nelson. "We always keep an eye on new technology. And we position ourselves as the best in handling order fulfillment, because we know that will make us flexible enough to handle the needs of the marketplace. Without these improvements, customer service could not be one of our premier strategies."

Company Names:
Pfizer Inc (Duns: 00-132-6495 Ticker: PFE)
Geographic Names: US

Descriptors: Pharmaceutical industry; Logistics; Order processing; Effectiveness; Case studies
Classification Codes: 9190 (CN=United States); 5160 (CN=Transportation); 5320 (CN=Quality control); 8641 (CN=Pharmaceuticals industry); 9110 (CN=Company specific)
Text: ...Normally, you would not take any of these steps until you had the product in hand ," notes Phil Rose, logistics center manager.

Once the distribution group received the Viagra, it packaged...

...000 lines to three million. Without our distribution infrastructure, I doubt that we could have handled such an increase in business. If we couldn't handle the increases while improving the level of service, we wouldn't have been doing our...goal is to maxi- mize throughput, products pass over weigh-in-motion scales. Pfizer traditionally affixed two labels to literature shipments-one label with shipper information and another with carrier information. Pfizer streamlined the literature--fulfillment process by combining its label information with United Parcel ...

...best in handling order fulfillment, because we know that will make us flexible enough to handle the needs of the marketplace. Without these improvements, customer service could not be one of...

8/K/2 (Item 1 from file: 9)
DIALOG(R)File 9: Business & Industry(R)

02043661 Supplier Number: 25517299 (THIS IS THE FULLTEXT)
WMS, bar codes, RFDC launch Borders.com
(Borders Group Inc has more than 240 retail stores and processes orders for these

stores and for Borders.com by using a warehouse management system in its warehouse of almost 200,000 sq ft)

ADC News & Solutions , v 54 , n 14 , p 12
December 1999
Document Type: Journal (United States)
Language: English Record Type: Fulltext
Word Count: 883

ABSTRACT:
Borders Group Inc incorporates a warehouse management system, bar codes and radio frequency data communication to fulfill orders for books and music CDs for customers on the Internet, at Borders.com, and in Borders retail stores, of which there are more than 240. Borders' warehouse has almost 200,000 sq ft to house about 700,000 stock keeping units of music CDs and books. According to director of distribution systems Don Kalke, the placement of orders begins when each order receives a scannable bar code at the dock. From there, the order is stored until shipment.

Full text details the processing of orders for Internet customers and for Borders stores using the warehouse management system.

TEXT:
"It takes more energy to ship a single book than a bulk shipment."

That's how Steve McAlexander, chief logistics officer of Borders Group Inc., describes the difference between filling individual Internet orders and making large shipments to Borders stores.

What he really means is it takes more discipline and real-time information to make E-commerce work.

"Any failure in filling an Internet order means we have an unsatisfied customer. Ensuring that doesn't happen requires a different level of intensity on our part," adds McAlexander.

As a result, Borders has turned to a warehouse management system (Catalyst), bar codes, and radio frequency data communication (RFDC) in its Laverne, Tenn. warehouse.

In addition to filling all E-commerce orders for books, videos, and music CDs, the facility handles special orders for the company's 240 plus retail outlets. Six other warehouses handle bulk shipments to the stores.
The most basic information link between Borders.com, the warehouse, and the customer is the bar code.

"We have no tolerance for a lost copy of a book because it may be the only copy of that book, or CD for that matter. So every item in the warehouse has a UPC or EAN bar code on it," says McAlexander.

But the value of that bar code information goes far beyond knowing where everything is in the warehouse, explains Mark Winterhalter, vice president of information technology. It allows Borders.com to commit to filling an order while the customer is on-line. Furthermore, the customer is not

billed for the shipment until the bar coded order passes through shipping.

"As you can see, bar codes are tied directly to our revenue flow," says Winterhalter.

Receiving and putaway

The nearly 200,000 sq ft warehouse stores roughly 700,000 stock keeping units (SKUs) of books and music CDs. There are more than 6 miles of aisles on three levels in the warehouse.

Receiving is under the control of the WMS, explains Don Kalke, director of distribution systems. At the dock, each purchase order is assigned a bar code that is scanned to begin receipt.

As each title is removed from a case attached to that purchase order, its bar code is scanned. This confirms that all items that should have been sent actually were. For any item that arrives without a bar code, one is printed, applied, and scanned in receiving. Data exchange between the WMS and workers is done with fixed terminals in the dock area.

As items are scanned, they are placed in bar coded totes, which are also scanned. Totes are then placed on a takeaway conveyor for delivery to one of the storage levels.

Although the WMS can direct putaway, says Kalke, workers are currently performing that function, placing titles in open locations on shelving. To complete putaway, the worker scans the tote, item, and location bar codes with an RFDC terminal. This information is sent by radio frequency to the WMS, linking all three for future picking operations.

Picking and shipping

Orders come in from the Internet for individual customers as well as directly from stores. Then, orders are fed to the WMS running on an HP 9000 where they are consolidated into picking routes.
All orders are broken into five categories. There are two basic types of Internet orders those with a single item and those with multiple items. Then these are broken into either HOTS (orders for next day delivery) and everything else. The fifth category is store orders.

Orderpickers are assigned a zone in the shelving. The WMS then downloads to each person's RFDC terminal the route to follow and items needed.

At each pick, the worker scans the item's bar code and its storage location. The item is placed into a designated tote on the worker's cart and the tote's bar code scanned too.

Totes are then put on a takeaway conveyor for delivery to one of three types of packing stations. The WMS communicates with workers at the stations by either RF terminal or fixed terminal.

One station handles all Internet singles. Each tote and the item in it are scanned, initiating printout of a packing list with the name of the book or CD on it. The worker then checks the printout against the item to ensure

accuracy. The item is next placed in a shipping box and a bar coded customer order number applied to the box.

That bar code is scanned when the box moves to the shipping department. A manifest system determines which carrier will ship it, and prints the address and carrier labels required.

Another station handles all Internet multiples. When the tote and its items are scanned, items are assigned a temporary storage location on shelving. The WMS tells the worker when all items with that order have been collected at that location. From this point forward, the multiple is processed like the single.

The third station handles store orders. They are processed much the same as Internet multiples. The only difference is one shipping label is run for all segments of the entire order.

As Kalke says, "Borders is doing everything possible to ensure that if you order a book, video, or CD that you're going to get it."

For more info...

Warehouse management system:

Catalyst Call 414-377-9400 or visit adcnews.com/info and enter #2004

RFDC system: Intermec Call 425-348-2600 or visit adcnews.com/info and enter #2005
Bar code scanners:

Symbol Call 516-563-2400 or visit adcnews.com/info and enter #2006

Printers:

Printronix Call 714-863-1900 or visit adcnews.com/info and enter #2007

Zebra Call 847-634-6700or visit adcnews.com/info and enter #2008

Company Names: BORDERS GROUP INC
Industry Names: Entertainment; Publishing; Recording; Retailing non-food
Product Names: Books (273000); Audio compact discs (365265); Special warehousing and storage NEC (422600); Book stores, new books and magazines (594200)
Concept Terms: All company; All market information; Capacity; Corporate strategy; Inventory; Number outlets
Geographic Names: North America (NOAX); United States (USA) (USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:
...addition to filling all E-commerce orders for books, videos, and music CDs, the facility handles special orders for the company's 240 plus retail outlets. Six other warehouses handle bulk shipments to the stores.

The most basic information link between Borders.com, the warehouse...

...communicates with workers at the stations by either RF terminal or fixed terminal.

One station handles all Internet singles. Each tote and the item in it are scanned, initiating printout of...

...department. A manifest system determines which carrier will ship it, and prints the address and carrier labels required.

Another station handles all Internet multiples. When the tote and its items are scanned, items are assigned a...

...location. From this point forward, the multiple is processed like the single.

The third station handles store orders. They are processed much the same as Internet multiples. The only difference is...

8/K/3 (Item 2 from file: 9)
DIALOG(R)File 9: Business & Industry(R)

02040684 Supplier Number: 25520438 (THIS IS THE FULLTEXT)
Rebuilding the Monopoly
(WorldCom is buying Sprint for $129 bil or more; Sprint PCS gives WorldCom a wireless carrier with a nationwide footprint)

America's Network Telecom Investor Supplement , p 16+
December 01, 1999
Document Type: Journal; Company Overview ISSN: 1075-5292 (United States)
Language: English Record Type: Fulltext
Word Count: 3730

ABSTRACT:
WorldCom is buying Sprint for at least $129 bil. Approval is yet to be received. Although WorldCom believes the transaction will benefit the public, there are concerns that the merger will result in decreased competition and increased prices. Sprint PCS would bring WorldCom one of 4 wireless carriers with a nationwide footprint; the others are AT&T, Nextel and Bell Atlantic/Vodaphone. WorldCom wants that footprint to offer a whole range of services to firms with nationwide operations. Sprint PCS would also give WorldCom an interest in the increasing business use of mobile equipment for Internet access and e-commerce. Detail is given to other advantages and disadvantages of the merger of WorldCom and Sprint. A table is included listing the impact of WorldCom's acquisition of Sprint in terms of the Herfindahl-Hirschman Index.

TEXT:
Will the WorldCom/Sprint merger lead to less competition and higher prices? If so, the stock market and economy will feel the pain.

By Alan Pearce

Alan Pearce is president of Information Age Economics, a Washington

D.C.-based research and consulting firm.

Why would WorldCom pay $129 billion (or more) for Sprint -- a reasonably large but relatively slow-growing carrier with a market value of $54 billion just nine months earlier?

Why would WorldCom pay nearly three times more for Sprint than it paid for MCI, the nation's second largest long distance carrier just two years ago?

What will WorldCom do differently than Sprint's management so it can add enough value to Sprint's assets to avoid diluting the market value of WorldCom's outstanding shares?

The industry and investment community are acutely interested in that last question. So are officials at the Department of Justice (DoJ), the FCC, the European Union and several state regulatory. commissions who are being asked to bless the proposed deal. Earning a return on the enormous premium that WorldCom (Nasdaq: WCOM) is offering to pay for Sprint (NYSE: FON) is not consistent with the sort of fiercely competitive market environment that many public officials would like to see.

WorldCom will assert that its acquisition of Sprint will further the public interest in two ways:

* By giving the company greater scale plus a mix of wireline and wireless capabilities, WorldCom will be better positioned to respond to new customer needs, particularly those related to high-speed Internet connections.

* Like AT&T's (NYSE: T) rationale for acquiring Tele-Communications Inc. (TCI) and MediaOne, WorldCom may argue that acquiring Sprint will give the merged company the resources to compete with the regional Bell operating companies (RBOCs) in local markets, particularly after they are allowed into long distance service.

Many business and residential customers may see the deal as a potentially anti-competitive buyout of the nation's third largest long distance carrier by the second largest, thereby creating a duopoly over long-distance markets. Given the circumstances, such concerns are understandable.

WorldCom's acquisition of Sprint would result in a significant increase in market power in the long distance arena. If WorldCom used its heightened market clout to raise prices (or avoid lowering them as fast as underlying network costs fall), it could have adverse repercussions not only on long distance and Internet users, but also on the entire U.S. economy. Those prospects may explain why WorldCom offered up the $129 billion bid for Sprint, 53 times Sprint's estimated 1999 earnings -- roughly twice the average price-to-earnings ratio at which all major U.S. carriers trade.

Breaking the Rules

In 1992, the DoJ and Federal Trade Commission (FTC) issued horizontal merger guidelines that antirust enforcers have used to judge the

competitive effects of proposed mergers.

The guidelines are based on a measure of market power commonly known as the Herfindahl-Hirschman Index (HHI). The index is calculated by summing the squares of the individual market shares of all firms participating in a particular market. In evaluating a horizontal merger where, say, the nation's second leading long distance carrier proposes to buy out the third -- the DoJ labels markets with a post-merger HHI in excess of 1800 as "highly concentrated."
The guidelines further stipulate that "where the post-merger HHI exceeds 1800, it will be presumed that mergers producing an increase in the HHI of more than 100 points are likely to create or enhance market power or facilitate its exercise." HHIs associated with WorldCom's acquisition of Sprint are well in excess of the DoJ/FTC guidelines (see table) and, thus, would trigger a presumption of market power as well as the potential for price increases in all relevant market segments in which WorldCom operates.

Fortunately for WorldCom, the guidelines also provide a process for overcoming an anti-competitive presumption. This involves a three-step 'showing' that a "merger is not likely to create or enhance market power or to facilitate its exercise if entry into the market is so easy that market participants, after the merger, either collectively or unilaterally could not profitably maintain a price increase above premerger levels."

* Step One of the showing would assess whether a new entrant can achieve significant market impact within a timely period.

* Step Two addresses whether a new entrant would be profitable enough to compete with the merged company in question. Here, the guidelines stipulate that for firms entering markets that require significant sunk costs (such as telecommunications), the profitability of that entry must be evaluated on the basis of long-term participation in the market. This is "because the underlying assets will be committed to the market until they are economically depreciated." If new entrants cannot compete profitably over the long haul, they cannot be counted on to "cause prices to fall to their pre-merger levels or lower."

* Step Three involves showing that "timely and likely entry would be sufficient to return market prices or profit margins to their pre-merger levels." According to the guidelines, "this end may be accomplished either through multiple entry or individual entry at a sufficient scale. Entry may not be sufficient, even though timely and likely, where the constraints on availability of essential assets, due to incumbent control, make it impossible for (the new entrant to profitably) achieve the necessary level of sales."

Can WorldCom over come the HHIs associated with its acquisition of Sprint? Only the Justice Department or the courts can tell. But market circumstances suggest that WorldCom's case will be tough to make.

Price War or General Armistice?

One key factor working against WorldCom's buyout has to do with deployment of next-generation, packet-switched networks like WorldCom's On-Net, Sprint's ION, and AT&T's Excite@Home. These networks will provide

bundles of local and long distance, voice and data, wireless and wireline, and video services. Although projecting market trends is speculative during periods of rapid technological change, next-generation integrated digital networks will likely raise barriers to market entry, complicating WorldCom's case.

Front-end, fixed costs of deploying these networks, including software development, will be higher than today's circuit-switched technology. This complicates market entry because carriers like WorldCom and AT&T that get to market first and build customer bases early will be able to spread their fixed costs over more customers, lowering their average cost per customer below the average cost of later entrants. Customers that buy bundles of services from a 'first mover' also will be less likely to switch to a new entrant, given the inconvenience, expense and risk when switching packages of services from one provider to another. Since both developments put later entrants at a cost-disadvantage, they make it less likely that subsequent entry will prevent the first movers -- WorldCom and AT&T -- from exercising market power.

Impact of WorldCom's Acquisition of Sprint (HHIs for Long Distance Voice, Data and Internet Backbone Markets)

	Total Long Distance Voice	Consumer Long Dist. Voice	Business Long Dist. Voice	Total Long Distance Data
Pre-Merger	3209	4133	2921	1730
Post-Merger	3881	4441	4105	2290
Increase	672	308	1184	560

	Long Dist. Data (except IP)	IP Standing Alone	Internet Backbone
Pre-Merger	2153	1928	1774
Post-Merger	2581	2600	2266
Increase	428	672	492

HHIs calculated from market share data reported in MCI WorldCom: Positioned to Win in a Data-Driven World (Bernstein Research, March 1999).

AT&T's leap into CATV raises more red flags. Besides resulting in a highly concentrated long-distance market, both deals suggest that AT&T and WorldCom may be trying to minimize the degree to which they will compete with one another.

Both acquisitions entail the payment of a substantial premium. As a result, each company will have to amortize added good will over the next 25 years to the tune of nearly $4 billion in increased annual amortization expenses. AT&T and WorldCom also will incur significant increases in capital expenditures to upgrade or build out their respective CATV and wireless properties.
These developments also imply that both companies will need to materially increase profit margins and earnings if their respective deals are to avoid diluting future P/E ratios and shareholder wealth.

Acquiring TCI and MediaOne and upgrading those cable properties, for

example, may cost AT&T upwards of $200 billion over the next five years. AT&T is betting much of its financial future (if not the entire ranch) on its ability to dominate the mass market for integrated digital network services, including high-speed Internet access.

WorldCom, on the other hand, remains focused on large business customers which account for two-thirds of the company's total revenue growth and, by all accounts, a larger portion of its earnings growth. Acquiring Sprint is consistent with WorldCom's focus on business customers in two key respects:

* Sprint PCS (NYSE: PCS) would give WorldCom one of only four wireless carriers with a nationwide footprint, AT&T, Nextel and Bell Atlantic/Vodaphone being the other three. WorldCom needs such a footprint to offer a full array of services to corporations with nationwide operations. Acquiring Sprint PCS also would give WorldCom a stake in the growing business use of mobile devices for Internet access and e-commerce.

* If the deal is approved, WorldCom would gain control of Sprint's ION which, combined with WorldCom's On-Net, would give the company control of one of only two nationwide integrated digital networks (IDNs); AT&T's Excite@Home service is the other. Again, AT&T and WorldCom appear positioned to carve up the market for advanced integrated data services, with WorldCom targeting On-Net at large- to medium-sized businesses, while AT&T markets Excite@Home to residential and small business users. If so, WorldCom's efforts to swallow Sprint's ION service becomes far more consequential.

In Search of the Open Network

The deployment of IDNs represents the single largest step in the transition from a circuit-switched, narrowband network to a packet-switched, broadband infrastructure. How rapidly this technology is deployed, by whom and at what prices have important implications for the users of the Internet and e-commerce -- in other words, for much of the U.S. economy.

Consider AT&T's refusal to open its high-speed cable networks to competing Internet service providers (ISPs). Were AT&T to tacitly agree with WorldCom to avoid head-to-head competition, it obviously would not want to dilute the potential value of Excite@Home by opening up its otherwise exclusive high-speed cable modem franchise to resellers.

Similarly, if WorldCom, which controls the only other IDN of any scale, elects not to make On-Net widely available to residential and small business customers as a competitive alternative to Excite@Home, then ISPs have no real means of forcing AT&T to open its network to competitors.

Public policy permitting, WorldCom's financial interests would be well-served by bifurcating the market for advanced integrated packet switched services with AT&T and vice versa. Absent much head-to-head competition, WorldCom and AT&T stand to build their respective customer bases for IDN services faster than would be the case if they were forced to compete with one another or with the RBOCs. Of course, the Bells' ability to provide advanced services on a nationwide basis remains hampered by the FCC's and DoJ's failure to remove long-distance restrictions.

When it comes to advanced broadband services made possible by IDN technologies, quickly building a customer base is key to creating market power. Again, rapid customer growth allows a carrier to spread its network costs -- the vast majority of which are fixed, over a larger customer base, thereby lowering its average cost per subscriber. As the cost per subscriber falls, carriers with greater scale can lower prices while maintaining or even increasing profit margins. Lower prices, in turn, attract more customers and add to future if not current earnings.

Similarly, as more customers sign up for bundles of new interactive services, the more valuable WorldCom's and AT&T's IDN brands will become. The reason has to do with Metcalfe's Law, which holds that the value of communications networks increase by the number of users squared.

America Online (NYSE: AOL) is fighting hard to force AT&T to open its cable networks because it understands that these very same phenomena explain why AOL has far more customers than any other ISP and why its market value has skyrocketed from $411 million to $143 billion since Netscape introduced the commercial Web browser in 1993. WorldCom and AT&T, however, also understand the power of operating leverage and Metcalfe's Law when it comes to rolling out high-speed Internet access services, and what AT&T has to gain by refusing to give AOL and others access to its Excite@Home network platform.

AT&T is counting on first-mover advantage in the high-speed Internet access market to pay for the lion's share of the $200 billion it will invest in its CATV properties in the near term. WorldCom may be looking at a similar, largely uncontested opportunity in the high-end business market to pay for the $150 billion or so that it plans to invest in Sprint.

What's Really At Stake?

If the debate over the WorldCom/Sprint merger were just about how the lion's share of the broadband integrated services market might be divided, it might not matter all that much. A first-mover advantage in their respective target markets could allow WorldCom and AT&T to deploy IDN capacity faster and cut prices for those services more quickly than they might in a more competitive, less concentrated market. If so, both companies could assert that focusing on different target markets could leave business and residential users better off.

It's also possible that giving WorldCom and AT&T enough of a lead to dominate the business and residential markets for broadband services will result in slower innovation and higher prices than might occur in a more competitive arena. If so, the direct cost to users and the indirect costs to the economy could be enormous.

In a recent speech to the U.S. Business Council, Federal Reserve Chairman Alan Greenspan noted that the current expansion of the U.S. economy is largely driven by higher productivity growth made possible by the Internet and related information technologies.

"There is also a virtuous cycle at play here," Greenspan stated. "A whole new set of profitable investments (in information technologies) raises

productivity which, for a time, raises profits -- spurring further investment and consumption. At the same time, faster productivity growth keeps a lid on unit costs and prices. Firms hesitate to raise prices for fear that their competitors will be able, with lower costs from new investments, to wrest market share from them. Such circumstances lead to a very favorable period of strong growth of real output and low inflation." Greenspan's views are supported by relationships between growth of the Internet and appreciation of U.S. stocks. Companies have benefited handsomely; since late 1993, when Netscape's Web browser began making the Internet available to the masses, the number of Internet hosts has risen 30-fold. During this same period, the combined market value of U.S. computer/communications stocks has increased by $2.5 trillion and $1.4 trillion, respectively.

Even more remarkable has been the breadth of market cap appreciation outside these two industries where, as Greenspan notes, growing numbers of companies are finding ways of using new information technologies to raise earnings by boosting productivity without raising prices. The absence of inflation has lowered interest rates, which has fueled that much more investment in productivity-enhancing technologies. The result of this 'virtuous cycle' has been a $10 trillion increase in the market value of all publicly traded U.S. companies -- an unprecedented increase in shareholder wealth, equivalent to an average of $100,000 per U.S. household over a little less than six years.

Here, the WorldCom/Sprint deal becomes far more consequential. If this or any other acquisition were to lessen competition, slow innovation or raise prices for broadband services, the deal could slow growth of the Internet and productivity gains that businesses are deriving from the Internet and e-commerce. Were that to happen, the stock market and the economy would feel the pain.

Proponents of the deal will point out that innovation and growth of the Internet and e-commerce could be threatened if major carriers like WorldCom and AT&T do not respond to demand for affordable, high-speed Internet access that IDNs will make possible. New e-commerce applications that promise to add the next big wave of value to and demand for the Internet will require much more bandwidth than dial-up modems can provide.

What's A Policymaker to Do?

Unconditional approval of the WorldCom deal will not serve the public interest. At a minimum, the deal should not be allowed to go forward until the RBOCs have obtained permission to offer long distance service in a majority of the states. Approval of the deal also should be conditioned on Sprint's local operations complying with the same 14-point checklist that the RBOCs must satisfy.

These conditions would serve two ends. First, they would help WorldCom overcome its reputable presumption of market power, since the RBOCs are the only facilities-based carriers with the resources and scale to quickly compete with WorldCom and AT&T in the advanced services arena. This is especially true of the market for large business customers that operate nationally or globally; for these customers, carriers that cannot provide services across LATA boundaries obviously need not apply.

Regardless, the fact remains that there is no way that the DoJ can approve WorldCom's buyout of Sprint without making an absolute mockery of the merger guidelines. Again, this will become apparent as AT&T reorients its primary focus from larger business customer accounts toward the mass market for residents and small business users, where it can best leverage its investment in CATV properties, including Excite@Home.

Second, tying approval of the WorldCom/Sprint deal to interLATA relief for the RBOCs would create an incentive on WorldCom's part to ensure that the Bells open local markets sooner rather than later. Today, WorldCom and AT&T have every interest in keeping the RBOCs out of long distance for as long as possible. Indeed, their respective interests in creating and exploiting a first-mover advantage in advanced service markets depend on keeping the Bells at bay. It should be painfully obvious to officials at the DoJ and FCC that these interests will not change until steps are taken to realign local and long distance carrier incentives to resolve local interconnection disputes quickly and fairly.

Policymakers must remove all regulatory barriers to entry as soon as possible. Unless the RBOCs get out of the gate in the race for advanced services customers in the same time frame as AT&T and WorldCom, first-mover advantage may cede market dominance to the two principal long distance carriers.

Shortly after WorldCom's offer for Sprint was announced, FCC Chairman William Kennard ruminated that the telecom industry may be only one more merger away from recreating the former Bell System. If the RBOCs are not immediately freed to respond to heightened financial incentives on the part of WorldCom and AT&T to divide the advanced services market between them, his forecast may well prove to be off by one.

Opinions expressed in this article are not necessarily those of AN. To comment on the issues, e-mail us at anrespond@americasnetwork.com.

The Sprint buyout, like many other WorldCom deals, would be an all-stock transaction. If and when the deal closes, Sprint shareholders will receive $76 in WorldCom shares, provided the stock is trading between $62.15 and $80.25.

If the shares trade above $80.25 at closing, Sprint shareholders receive 0.94 shares of WorldCom stock, or more than $76 per share. In addition, Spring PCS shareholders would get one share of a new WorldCom PCS tracking stock plus another 0.1547 shares of WorldCom stock, or about $13.28 at WorldCom's Oct. 29 closing price of $85.813.

Is WorldCom Just Trying to Compete?
By Randall Carlson

The WorldCom/Sprint merger follows a long line of telecom mega-deals and has important implications. A number of the industry's mega-partnerships, or "supercarriers," are emerging. WorldCom/Sprint is establishing a footing to compete on par with other industry giants, such as:

* AT&T/TCI/MediaOne/British Telecom;

* Deutsche Telekom/France Telecom/Global One;

* Bell Atlantic/GTE;

* Global Crossing/Frontier;

* US West/Qwest/LCI; and

* SBC/Ameritech.

The seven primary supercarriers are offering a bundle of services, including Internet, e-commerce, Web hosting, local and long distance, and wireless services. By controlling the entire bundle of services, the supercarrier is leveraging strategic profitable services. Traditional services that have become commoditized, by contrast, have a lesser effect on overall profitability.

WorldCom expects that the first full year of the merged company operation will occur in 2001, with savings of $1.9 billion. This will rise to $3 billion annually by 2004. WorldCom/Sprint face huge infrastructure costs in preparing themselves to compete in new services, and consolidation will make efficient use of capital funds. Capital expenditures will account for between 68% and 43% of the savings between 2001 and 2004, according to IDC.

Some of the most common network problems, according to The Yankee Group, are reliability and compatibility of infrastructure. These will be alleviated by the merger of Sprint's ION and WorldCom/UUNet's DSL service.

Coincidentally, in 2001, several pieces of telecommunications infrastructure -- i.e. undersea cable systems -- will go into service, causing a potentially high level of international price competition. This is disconcerting to long distance carriers that rely on international services as a key high-margin piece of their businesses. WorldCom has several significant equity stakes in undersea cable systems, such as the Gemini/Columbus-3 trans-Atlantic cable, Southern Cross trans-Pacific cable, and the Maya-1 Caribbean system. Sprint now can leverage WorldCom's equity position on undersea cable systems to lower transoceanic costs, and compete favorably on such routes.
WorldCom gains an important wireless component through Sprint PCS. Also, as wireless becomes an important medium for Internet access and digital communications, WorldCom will be better positioned to play. Other higher bandwidth services, such as LMDS and MMDS, will play roles as well.

The regulatory hurdles for the WorldCom/Sprint deal will be relatively minor, considering both partners are long distance players and the FCC and Congress have no significant basis for objection. The traditional antitrust bias against size has nearly been eliminated from legal thought; the local-long distance separation continues as the only antitrust precedent.

It is because of potential legal objections to local/long distance mergers that Sprint probably chose WorldCom's offer. Even though the Qwest/US West merger has received a lot of publicity, it has yet to receive approval by the regulatory authorities. The Telecom Act prohibits US West from offering

any in-region long distance services over the Qwest network. Therefore, by having both partners targeting synergies in long distance, the WorldCom/Sprint merger will likely proceed without too much difficulty.

WorldCom/Sprint is a typical supercarrier, filling gaps in its service portfolio and maintaining profitability in the face of massive infrastructure investments. The race for the best partners is underway, and WorldCom will secure this deal before the supercarriers raise the ante yet again -- and that will be as soon as the local carriers are allowed into in-region long distance.

Randall Carlson is a manager of telecommunications consulting at Arthur D. Little (Cambridge, Mass.), and is the author of the upcoming book, The 21st Century Supercarrier.

Special Features: Table
Company Names: SPRINT CORP; SPRINT PCS; WORLDCOM INC
Industry Names: Mobile communications; Telecom services; Telecommunications
Product Names: Radiotelephone communications (481200); Long distance telephone communications (481349)
Concept Terms: All company; Mergers, acquisitions & divestitures
Geographic Names: North America (NOAX); United States (USA) (USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:
...participating in a particular market. In evaluating a horizontal merger where, say, the nation's second leading long distance carrier proposes to buy out the third -- the DoJ labels markets with a post-merger HHI in excess of 1800 as "highly concentrated."

The guidelines...

...market for integrated digital network services, including high-speed Internet access.

WorldCom, on the other hand , remains focused on large business customers which account for two-thirds of the company's...

8/K/4 (Item 3 from file: 9)
DIALOG(R)File 9: Business & Industry(R)

00779724 Supplier Number: 23324707 (THIS IS THE FULLTEXT)
Hot Summers, Sizzling Room Air
(Amana is introducing electronic controls, program to eliminate short cycles & more precise temperatures in its Quiet Zone air conditioner line)

HFN , v 69 , n 42 , p 97
October 16, 1995
Document Type: Journal ISSN: 1082-0310 (United States)

Language: English Record Type: Fulltext
Word Count: 1362

ABSTRACT:
Trends in the room air conditioner market include more electronic controls, greater reliance on colorful merchandising cartons and more micro-managing of specific models to reach targeted demographic groups. Air conditioner manufacturers are concentration on good air distribution, quiet operation, modern styling and convenience. Amana is introducing electronic controls, a program to eliminate short cycles and more precise temperatures in its Quiet Zone line. Carrier is introducing an abbreviated Freyven line for Hispanic communitties. Sharp is introducing a new series of air conditioners called Comfort Touch, which feature a touchpad. The article discusses new air conditioners from Danby, DeLonghi, Fedders, Frigidaire, Friedrich, Goldstar, GE, Goodman, Matsushita and Whirlpool.

TEXT:
HFN Report

Leading manufacturers are hitting the streets with their room air conditioners for the 1996 season. With low inventories after three hot summers, the product lines reflect more fine-tuning than radical changes.

Under the circumstances, almost anything that blows cold air could sell for next year. Yet competitive pressures force continual updating of product features. Good air distribution, quiet operation, modern styling and convenience are primary selling points, and whether the consumer is avid or not, energy efficiency keeps getting better.

Other trends to be noted are more electronic controls; greater reliance on colorful merchandising cartons, and more micro-managing of specific models to reach targeted demographic groups.

Based on information provided by the manufacturers, here is a summary of 1996 product lines.

Amana: The premium Quiet Zone line comes with electronic controls, a program to eliminate short cycles, more precise temperatures and more insulation for improved sound. One model steps up from 8,000 to 9,000 BTUs and adds 1.5 points to its energy rating.

Altogether there are eight Quiet Zones, nine Cool Zones and seven through-the-wall units. Capacities span from 5,400 to 20,500 BTUs and energy-efficiency ratings run from 8.5 to 10.5. Nine machines carry EERs of 10.0 or more Amana also promotes its two-year warranty, said to be unique.

Carrier: The basic line remains intact, but two additional brands are being offered for targeted markets. Freyven, described as Carrier's second label in Mexico, is moving north with an abbreviated line primarily for Hispanic communities. Bryant is a more traditional series for commercial applications and little retail appeal.

Overall Carrier counts 22 cooling units with capacities from 5,000 to 32,500 BTUs. Five heat-and-cool models run from 10,000 to 24,000 BTUs, and four heat-pump machines are rated from 10,000 to 18,000 BTUs. With the

depleted stocks after the hot summer, merchandise has been put on early availability.

Danby: The Canadian company will offer 16 models in three series. Its highlights are four-function portable units: oscillating machines on casters with 3,200 or 7,500 BTUs, three-speed fans, 1,200-watt electric heaters and dehumidifiers. These are part of the Specialty series, also consisting of two vertical models for slider applications.

The step-up Design Air series has been revised. All have slide-out chassis. A molded cabinet will appear first on a 5,000-BTU model with a carrying handle. Other features include oscillating air sweep and improved efficiency to 9.7 EER.

Most of the competitively priced Danby series runs about 9.0 EER. All offerings are in Euro-gray.

DeLonghi: The portable line will expand to three units next year and distribution will grow beyond retail channels. Model Pac-02 cools with an air system instead of water; the Pac-50 has water-and air-cooled systems, each with a condenser. DeLonghi's Pac-GSR is a more powerful split unit: at 11,000 BTUs, it can be used for commercial applications.

Plans to diversify distribution include business with contractors; builders, and even schools and hospitals where standard air conditioning cannot be installed in laboratories.

Fedders: Small-frame Fedders and Emerson Quiet Kool units are featured: one model with each label is 5,100 BTUs and 9.5 EER; another is 10,000 BTUs in that little box. Mid-frames get a new chassis with slide-in capability. Capacity has been increased in some larger sizes.

Befitting Fedders' intention to provide one-stop air-conditioning shopping, the flagship brand offers 27 models from 5,000 to 32,000 BTUs. More contemporary gray and less woodgrain is the fashion story. Emerson counts 30 models and essentially mirrors the Fedders line. Airtemp units for two-step distribution fit in all the chassis configurations.

Friedrich: After the big line revisions a year ago highlighted by the fuzzy-logic Quietmaster introduction, changes for '96 amount to fine-tuning. Again the line consists of 51 models. Quitemasters reportedly add "permanent memory" -- no matter how long power is out, they will revert to the last settings when electricity is restored. Two Quietmasters have been increased in capacity, including 18,500 BTUs from 18,000.

In the Portable series, an 8,000 BTU unit moves from 9.6 to 10.0 EER. Every model from 5,000 to 8,000 BTUs among Q Starrs is rated at a minimum of 10.0 EER. Heat-cool Wallmasters have been upgraded with an automatic cycle coordinating the fan and compressor. A slider-casement unit at 10,000 BTUs steps up to 9.5 to 9.0 energy rating.

Frigidaire: New for '96 are additional intermediate models with an improved air-flow design said to offer more even distribution. The company also is touting "exceptional quietness in operation" for these units and its

compact sensor models, the White-Westinghouse and Frigidaire W/FAC056T74.

White-Westinghouse's line consists of 29 SKUs: two low profiles, eight compacts, four intermediates, five heavy-duty, two casement and eight through-the-wall. EERs exceed 9.14 on 16 models. The Continental series comes in three-color cartons.

Among 13 Frigidaire-brand SKUs, two are low profiles, four are compacts, three are intermediates and four are heavy-duty. Seven models exceed 9.4 EERs. The Gibson dozen is divided among one low-profile, four compacts, two intermediates and five heavy-duty.

GE: The line was described as similar to this year's with focus on EERs. Among 18 SKUs, three are new models with upgraded energy ratings. The step-up replacement units are a 5,000 and a 6,000 BTU, each at 9.0 EER and a metal cabinet, and a 24,000 BTU carrying an 8.7 energy rating.

Goldstar: An expanded program is built around a completely new line of 12 models. Capacities still are 5,000 to 21,000 BTUs, but now there are two units in most sizes to hit high and higher EERs. There's an 8,000 and another 5,000.

According to the company, the big selling point is an innovative filter system. To contain dust, a fold-down or up-door exposes the entire filter surface, and the dirty filter can be lifted straight out. Most models also have germicidally treated filters for cleaner air.

Goodman: For its second season, five slide-out models with portable chassis are being added to the initial line. Janitrol and Hamilton Electric brands primarily for retailers and Goodman and GMC units for distributors span from 47,800 to 23,500 BTUs in 24 models.

Next year choices will be offered in most capacities: High-efficiency (usually 10.0 EER) models will be duplicated in step-down (usually 9.0) machines to hit price points in regions where rebates are not important. Information will be available later on through-the-wall and split units to ship in the spring.

Matsushita: Changes for next year affect three Panasonic models and one Quasar unit. Each becomes all-white -- no more woodgrain or black accents -- and adds through-the-wall capability. These are the Panasonic CW-1406BU, CW-1805SU and CW-2005SU (the last numeral of each is two digits higher than this year's model number), and the Quasar HQ2142KH (replacing the -GH).

Again Panasonic's focus is on the 3inOne compacts measuring 17 23/32 inches wide. The Deluxe units are rated at 5,800 and 7,800 BTUs with 10.0 EERs. Three other Deluxe models step up to 13,500 BTUs. There are three Compact machines and four in the Standard series from 5,000 to 20,300 BTUs and 8.0 to 10.0 EERs rounding out the line.

Quasar's narrow equivalents are two Cool Saver models and the same Standard and Cool Look compact lineup. However, there's only one other Quasar Deluxe model, the 2142, with 13,500 BTUs.

Sharp: Comfort Touch is a new series of five touchpad models. With an

emphasis on convenience, features include three cooling speeds plus fan; 1-degree temperature increments from 64 to 86 degrees; 12-hour delays; energy-saver operation, and one-touch filter removal. Vital statistics are 5,500 to 12,000 BTUs and 9.2 to 10.0 EERs.

Altogether there are nine new models and two revisions from this year. The entry-level AF-500X provides one cooling speed, a mounting kit, 5,000 BTUs and 8.0 energy rating. Remaining units cover the gamut from 5,100 to 18,700 BTUs and 9.0 to 10.0 energy ratings, and are equipped with three speeds, thermostat, one-touch filter and mounting kits. Two of these air conditioners, the AF-1406X and AF-1906, are slide-out models with four-way directional controls and energy-saver.

Whirlpool: The Value series for the Whirlpool brand adds two models, the ACM122XE with 12,000 BTUs and 9.0 EER, and the ACM 152XE with 15,000 BTUs and 10.7 EER. All Value units sport easier-read control-panel graphics and updated styling for a unified family appearance.
The Roper line is unchained. All of the company's cartons feature improved sizing charts for self-merchandising and stronger messages to consumers about the need to choose the proper capacity.

Company Names: AMANA APPLIANCES (MAYTAG CORP); CARRIER CORP (UNITED TECHNOLOGIES CORP); DANBY PRODUCTS LTD; DELONGHI SPA; FEDDERS CORP; FRIEDRICH AIR CONDITIONING CO; FRIGIDAIRE CO; GENERAL ELECTRIC CO; GOLDSTAR CO LTD (LUCKY-GOLDSTAR GROUP); GOODMAN; MATSUSHITA ELECTRIC INDUSTRIAL CO LTD; SHARP (GERMANY); WHIRLPOOL CORP
Industry Names: Industrial machinery
Product Names: Air-conditioners and dehumidifiers, room (358569)
Concept Terms: All market information; All product and service information; Product introduction; Trends
Marketing Terms: All product marketing; Line extensions
Brand Names: Comfort Touch; Freyven; Panasonic; Portable; Quasar; Quiet Zone; Quietmasters; Value
Geographic Names: North America (NOAX); United States (USA) (USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:
...remains intact, but two additional brands are being offered for targeted markets. Freyven, described as Carrier 's second label in Mexico, is moving north with an abbreviated line primarily for Hispanic communities. Bryant is...

...A molded cabinet will appear first on a 5,000-BTU model with a carrying handle . Other features include oscillating air sweep and improved efficiency to 9.7 EER.

Most of...

8/K/5 (Item 1 from file: 275)
DIALOG(R)File 275: Gale Group Computer DB(TM)

01176134 Supplier Number: 00666773 (This Is The FULL TEXT)
Mail-order houses: volume discounts, convenience and flexible terms are helping woo once-hesitant corporate buyers.

Greitzer, John
PC Week , v3 , n13 , pS-11-S-13
April 1 , 1986
Document Type: buyers guide
ISSN: 0740-1604
Language: ENGLISH Record Type: FULLTEXT; ABSTRACT
Word Count: 2556 Line Count: 00193

Abstract: Buying personal computer equipment from mail-order houses has been frowned upon by large corporations who traditionally prefer to deal with other large corporations, but the nature of the mail-order firms is changing. At first the companies sold low-cost equipment to hobbyists who could repair their own machines if anything went wrong, but now many mail-order houses are offering corporate customers volume discounts, accepting purchase orders, and providing service agreements through local independent repair outlets. The advantages of mail-order personal-computer buying include price, delivery, product selection, and innovative marketing techniques. The disadvantages include the return process for bad equipment, the poor reputation of the firms, the lack of person-to-person contact, and the inability to assure software compatibility before the purchase. For personal computer users who are more concerned with price than with direct support, mail-order houses may be a viable alternative. CAPTION: Mail order - hardware. CAPTION: Mail order - software or diskettes. CAPTION: Mail order - hardware and software.

Text: Mail-Order Houses

Volume buyers looking for low prices and door-to-door delivery of PCs, peripherals and software are increasingly turning to mail-order sales outlets to make their purchases. Some mail-order companies are wooing these corporate customers by offering them volume discounts and more flexible service and credit arrangements.

Most corporate PC purchasers wouldn't even consider buying from mail-order outlets in years past. The mail-order business suffered from a bad reputation, stemming from their alleged lack of post-sale support and their supposedly common practice of bait-and-switch marketing: advertising rock-bottom prices for products not in stock and then trying to sell the customer a more expensive product in its place.

Despite the reputation, industry analysts said, mail-order outlets are selling volume orders of Pcs, software and peripherals to the corporate world with increasing frequency.

The larger mail-order outlets have actively sought this new corporate business; some companies have even set up corporate account programs with attractive terms for price, delivery and support.

"What we've really tried to do is change the way people think of mail order," said Robert Pierce, president of CompuMart, a mail-order film he started in Dallas in September 1985.

"We want to be like IBM," he said. "I've been watching IBM for years and years. The first computer I got may hands on was an IBM 705 back in 1959. I want to provide that same kind of stability, that same kind of support." While dreams of comparisons with IBM may be a tad premature, Pierce's comments echoed those of numerous mail-order executives who are successfully luring more and more corporate accounts.

No Support in the Old Days

Before the IBM became an industry standard and then a commodity, mail-order firms mostly sold inexpensive products to hobbyists capable of "tinkering" with the computers if they broke down. No support was requested by these customers, and none was offered.

Things began to change after the PC became so well-entrenched in the business world that other manufacturers jumped into the market, offering less expensive compatibles ("clones"). Mail-order companies could buy large quantities of these machines cheaply, mark up the selling price and still offer lower prices than those of retail stores or manufacturers' sale forces, both of which have much higher overhead costs than do mail-order companies.

Even then, the world of big business was reluctant to buy PCs through mail-order channels. As the saying goes, big business likes to do business with big business. Corporate purchasers weren't willing to take the risk of buying computers through the mail from a small, distant company with no local service outlet.

During the past year to 18 months, industry observers said, corporations have become more familiar with PCs, and many firms have established their own service departments or contracted with local service outlets to fix the machines. As these corporations become less concerned about the service issue, they're more willing to take advantage of the cheaper prices and wide selection of products offered by mail-order outlets.

Discounts: The Big Attraction

The biggest advantage of mail-order houses is their low prices. Although costs vary from one outlet to the next, IBM computers and compatibles can be purchased for roughly a half to two-thirds the price that retail stores charge for the same machines.

Beyond the initial discount, the large mail-order firms offer volume discounts, typically at quantities of five, 10, 25 and 100 or more. At each of those points, the price is cut by an additional 3 to 5 percent.

It's hard to argue with such discounts, especially since the compatibles can be repaired or enhanced with the same industry-standard components as IBM computers.

"I think we've finally gotten to the point where there is a base of corporate users out there who don't feel that the machine has to say 'IBM' on it," said Robert Michsky, president of Mainstreet Computer, a mail-order outlet in Bastrop, Texas.

Delivery is another advantage of mail order for corporate customers. Instead of having to drive to a retail store, or send someone to the store to pick up the order, the customer has the convenience of having the order delivered to the office.

Purchase Orders Cost More?

Many mail-order companies accept purchase orders, since that's how most big corporations make their purchases. However, the customer should be aware that this often involves extra charges.

Mail-order advertisements list very low prices for many products, but a number of these ads also have fine print at the bottom, stating that the advertised prices are for cash or credit-card purchases only. Typically, a purchase made with cash, Visa or Mastercard saves the customer an extra 4 to 10 percent. Those who buy through a purchase order don't get these savings, so they have to pay slightly more than the advertised price.

Two firms that don't charge extra for purchase orders say their

policy stems from a desire to appeal to corporate accounts. "In the volumes that corporate accounts buy-say $10,000 on up to $100,000 orders--you know the only way these companies are going to do it is through a purchase order," said Rich Martini, president of Diamond Sfotware, of Oakland, Calif. "So we've tried to be responsive to this and set up corporate accounts where we accept purchase orders without tacking on any extra charge."

Mainstreet Computer is another outlet that doesn't charge extra for purchase orders. "We don't have the extra charges for purchase orders because we felt the corporate market called for a more straightforward approach," said Micksky, the firm's president, adding that he "would caution people who are buying through mail order that they should make sure they know what the total cost will be before they commit themselves."

Over-the-Phone Service

One of the long-standing objections to mail order has been its supposed lack of service, but most mail-order firms have a full-time service staff to answer user's questions over the phone.

All of the mail-order firms contacted said that the great majority of problems can be solved by over-the-phone consultation. If a customer follows the service staff's advice and finds that the product still doesn't work, the large mail-order outlets will ship a replacement product to the customer. After receivisng the replacement, and getting the computer system up and running, the customer then ships back the faulty product.

Smaller mail-order companies may insist that the customer ship back the faulty product before they will send a replacement. A few mail-order firms will pay for all the shipping charges involved; others split the charges with the customer.

Most of the outlets ship these replacement parts by "second-day air" via the socalled blue label service of United Parcel Service (UPS). They'll also send an order overnight using the UPS "red label" service, Federal Express, or another overnight carrier; however, in almost all cases, the customer has to pay for overnight delivery.

"In a few cases--if it's a big order and the problem with a product was our fault, if it was within our control--we'll pay for the overnight express," said Tim Johnson, sales manger for Computer Dynamics, a mail-order film in Austin, Texas. "But generally, if it's a problem that was beyond our control, the customer has to pay the extra charges for overnight delivery."

Johnson's remarks were typical of most mail-order companies.

Call for Service

To get service, customers can use special "service hotlines," as the mail-order firms call them. These hotlines may be toll-free 800 numbers or regular toll calls. Most of the mail-order outlets list the service telephone numbers in the ads.

How long does it take to reach the service people at these numbers? Times will vary. A customer may get a service person right away, but more often, the service staff at a mail-order company will be busy, and will have to call the customer back. The mail-order companies all said they're almost always able to get back to a customer within a couple of hours.

These numbers can also be used if customers are wondering what the status of their ordered PCs is; there's an order tracking system in place at most outlets. The large outlets have their orders computerized; some keep separate lists of orders that were sent from stock, and orders taht were shipped from the "backlist," meaning the outlet had to get the equipment from somewhere else because they didn't have it in stock.

"As long as you can give us the name of the person who ordered it and the state it's going to, we can track it right away," said Marty Smith, sales manager for Topline Computers, in Salt Lake City, Utah.

"Lots of customers have the same name, so in our computer system we break it down by state."

"Every invoice is tracked at every step of the way through our system," said Pierce of CompuMart. "We can readily cross-check any order. Once it's in transit, it would be up to the carrier. I know some of the carriers have in-transit checking, also."

Rapid Turnover

The current group of computerized, corporate-seeking mail-order firms are a very young generation, demonstrating that the turnover among PC mail-order outlets has been tremendous.

Many of the early outlets were started by people with an expertise in computers and no knowledge of the market. These firms rode the initial boom in PC sales in the early 1980s, then found the pace of sales and high rate of technological change was more than they could handle, industry sources said.

Mainstreet's Michsky said he thinks the new generation of mail-order firms may be more stable than previous ones. "This was really a chaotic business for awhile. Most of the mail-order companies went through a lot of internal problems, mainly because the PC business moved so fast, they grew so quickly that they couldn't handle it. The current companies, at least the big ones, are better financed today. They're stronger, and I think they've become more able to settle down and deal with customers on a professional level.

"When you're trying to keep up with 400 percent annual growth rates," said Michsky, "it's just crazy. It's hard to settle down and really work on the service end of the business. But I think things are starting to settle down, the market is starting to firm up, and the larger mail-order companies are able to respond better."

Turning to the Corporate Customer

Mainstreet's corporate orientation is a recent development, said Michsky.

"In the past we've had a program where we give discounts in quantities of 10 or larger. This was primarily for selling to other resellers.

"What we're looking at now," he said, "is setting up a program for our corporate customers, those who establish accounts with us, in which we would give them discounts across the board, even at quantity one. This program isn't in place yet, so I can't say exactly what the discount will be. But it's something we're looking at."

Diamond Software offers its coporate accounts several services, such as an evaluation library through which customers can try a software package for 20 or 30 days at no charge. At the end of the evaluation period they can return the package to the outlet or buy it. Diamond also offers a "locator service," in which is will track down hard-to-find software packages for a corporate account.

"This orientation toward the corporate customer is something that really just evolved in the last eight to 10 months," said Martini.

Product selection is vast at mail-order outlets. They carry a much wider range of products than do retail stores, which usually specialize in only a few brands of hardware and software. The wide selection of mail order can be a big advantage when users are choosing an enhancement

product.

Considering The Disadvantages

But for all of mail order's advantages, there are some potential drawbacks that should be considered. The door-to-door delivery service offered by mail order is fine when the order's coming to you, but not so fine in reverse. If you've received a faulty product, and you have to ship it back, it can be a pain in the neck to repack the product, send it off, and pay the freight charges to boot.

software compatibility may also be a problem in some cases where the customer isn't using one of the popular, well-known packages, or when the customer is purchasing a mail-order clone computer. In a retail store, the customer can try out a computer system with a particular software package to make sure there's compatibility before buying either one.

With mail order, however, the customer must find some way of ensuring such compatibility before making the purchase. If there is any doubt, a customer should talk to both the software developer and the hardware manufacturer to find out whether a particular package will run on a particular hardware system. Industry observers add, however, taht with the commonly used packages such as 1-2-3, dBASE and WordStar, there's rarely a compatibility problem.

Users shouldn't have problems getting service or answers to questions from mail-order companies, at lesat not the major ones. They generally have qualified service people staffing the telephones. Service has become more of an imagined problem than a real one.

Still, there's reluctance on the part of some buyers to go through mail-order channels. They like having someone to deal with in person, and they want to be able to meet with the sales or service representative.

That personal contact is the one thing that mail-order companies cannot supply. If that's important, then a corporate customers shouldn't buy from a mail-order outlet. But if that's the customer's only objection, he or she might want to reconsider. Service contacts can be obtained from local outlets that can provide on-site maintenance of any industry-standard product. (This on-site service probably can't be provided for the mail-order house-brand computers, however.)

In short, the decision of whether to buy via mail order may come down to service concerns, and how familiar the corporate users are with PCs. For those who have used PCs and can provide their own service or obtain local service, mail-order outlets may well be the most economical source of PC products.

Descriptors: Personal Computers; Equipment Acquisition; Mail Order; Trends; Support Services; Volume; Companies
File Segment: CD File 275 ...I've been watching IBM for years and years. The first computer I got may
hands on was an IBM 705 back in 1959. I want to provide that same kind...
United Parcel Service (UPS). They'll also send an order overnight using the UPS "red label " service, Federal Express, or another overnight carrier ; however, in almost all cases, the customer has to pay for overnight delivery.

"In a...

...the pace of sales and high rate of technological change was more than they could handle , industry sources said.

Mainstreet's Michsky said he thinks the new generation of mail-order ...

...because the PC business moved so fast, they grew so quickly that they couldn't handle it. The current companies, at least the big ones, are better financed today. They're...

8/K/6 (Item 1 from file: 16)
DIALOG(R)File 16: Gale Group PROMT(R)

06423445 Supplier Number: 54938064 (THIS IS THE FULLTEXT)

Working the Minute Mine.
Muraskin, Ellen
Computer Telephony , v 7 , n 6 , p 76
June , 1999
ISSN: 1072-1711
Language: English Record Type: Fulltext
Document Type: Magazine/Journal ; Trade
Word Count: 6161

Text:
With the right tools, billing info yields clues to greater profit.

There's gold in them thar CDRs! Not just because they're the records that go on the bills that result in the checks that flow from subscribers to telco carriers. The "gold" we speak of here goes a step beyond simply getting paid. It's the mine of usage data that helps your marketeers identify, cross-sell, retain (or win over, or win back) the most profitable customers.

If there's a way to identify and cherish those valuable customers, the folks at my present long distance carrier don't seem to know about it. They should learn, because there's good reason to keep me: with all the calls I make researching Computer Telephony stories, I'm good for $150 a month just for wireline and calling card, easy.

And there are compelling reasons for me to jump ship: Ever since I got lured away by the promise of nine-cents-a minute long distance, customer service has been such a nightmare that I'm more than ripe for the picking. The telemarketer (who called at suppertime) also promised I'd be able to see my bill on the web -- but it ain't so. Account codes, another promised service, also didn't work at first. And it took me six CSRs, six identical trips through the front-end IVR, six DTMF inputs of my phone number (and six verbal repetitions of the same damn number!) to find out why. Calls to customer service bounced from agent to agent, queue to queue, invariably ending in frustration.

Am I ready to switch! Next telesales agent who calls -- even if she interrupts a dinner that I've cooked from scratch -- she's got the sale. I'm outta here.

What might have forestalled such a nasty divorce? A good, integrated billing and customer care system. One that lets me resolve little problems by dealing with a single agent (or even two!), instead of being routed around six irrelevant departments, explaining my problem anew at each and every step.

Such a system might show one CSR all there is to know about my account: history, charges, average billing, services used. Add a level of intelligence, and the system could tell that agent (via screen pop) that

here's a customer at risk for churn, one who's worth keeping. A little more intelligence, and the system might even deduce and specify which incentives I'm eligible for, and which of these has the best chance of locking in my continued patronage.

It would also be wonderful if their system produced a bill that was clear and readable (something the FCC has just begun to mandate from wireline carriers), or even better -- let me access a web site and answer my own questions. A web site that could even tell me about other services and products I might want to buy. A site that could even gather market intelligence. For the chance to stay out of customer service hold queues, ! would gladly offer up mother-lodes of demographic information.

How close are we to systems that do that? We've just arrived. We're beginning to see the first actual purchases and pilot programs of software modules -- add-ons or modules included with billing packages -- that specifically target "churn prevention." Related software products offer decision-support -- helping marketers segment the customer base, lock onto cross-selling and new-customer targets, and even manage sales campaigns.

BILLING COLLEGE

Predivestiture, billing was a back-office afterthought. Monopolistic Ma Bell knew that she'd get everyone's payment or they'd go without phone service. Today, billing is an essential part of an aggressive marketing platform in a fiercely competitive telecom marketplace. Newer telcos, unburdened by legacy systems, have an advantage here.

"Old systems could not support new products and services in acceptable timeframes," says Avi Ofrane, President of Billing College (Teaneck, NJ -- 201-833-9494). Billing College is a worldwide training outfit that offers three-and-a-half-day and five-day courses on telecom billing, and counts among its alumni employees of all the major IXCs, many PTTs and next-gen telcos, as well as billing vendors. "Telcos can no longer afford to wait six to twelve months," Ofrane says. "They lose market share to aggressive startups -- especially in the cellular world, where you have new products all the time." And where the churn rate is a stomach-churning 30 percent per year.

One way to prevent churn is to offer one-stop shopping: entangling customers in an almost inextricable web of products: local, long-distance, Internet access, wireless, calling card, cable TV, etc., all presented through one bill and supported through one-call customer service. That's the idea behind "convergent" billing platforms -- and most billing software makers call themselves convergent now.

The other thing "convergent" systems offer is the ability to actively upsell customers. If you know a customer is already paying for services A, B, and C, they can be targeted as an excellent prospect for (discounted) D. A full-featured integrated Billing/Customer Care system can pop this fact up on a CSR screen.

Of course, a savvy marketing analyst should be able to feed usage data into an Excel spreadsheet and come up with the same target prospects. But as Saville Marketing VP Rich Aroian points out, "It's one thing to have that information available to a marketing person with Excel in a back room; it's another to make it readily available to a CSR. The key is making sure that information can be acted on." Systems on the high end automate that feed into CSR screens. We'll start by looking at these systems, mostly implemented in Unix, and geared for telcos with at least half a million subscribers.

MID-RANGE SYSTEMS

"The Holy Grail of billing systems -- no vendor has one yet -- is one

that runs off the shelf, fi la Windows," says Ofrane. The smaller packages, mostly NT-based and meant for subscriber bases of under 500,000, are generally closer to that grail. They're easier to implement. But they're also much more limited. They're not geared to the telco supplying complicated products (e.g., VPNs) to multinational corporations. On the other hand, they cost less.

They also generally don't come with sophisticated data-mining algorithms and market analysis, and they don't pipe upselling scripts into CT-integrated screen pops. But to varying degrees, these midrange billing products address the market-spotting and churn-prevention issue. Some get quite sophisticated, some merely allow you to output an unlimited number of reports, perhaps based on customized data fields. Some pipe their customer records into third-party data mining tools or CRM engines. Some are already offering web-based customer care.

HIGH END SYSTEMS

Amdocs

Amdocs (St Louis, MO -- 314-821-3242), one of the big three names in the top tier of telco billing, had a lot to tell us back in January when we started investigating billing for IP Telephony ("IP Telephony's Black Art," p. 50). VoIP was just one new module in their multi-service, convergent Ensemble package.

Ensemble is a modular but comprehensive telco solution, comprising provisioning, billing, collections, network resource management, fraud prevention, and the whole call center customer care space. They pitch one system at the whole telco range of services, plus paging, Internet access and cable TV.

One of their optional Ensemble modules is Sales and Marketing; within this module are two closely linked software packages, Churn Management and Campaign Management. Judging by a talk with their Chief Scientist of R&D, Gadi Pinkas, and President of R&D, Shlomo Baleli, these tools for predicting customer behavior and tailoring interventions are about as sophisticated as this category gets.

Their Churn Management module is going into production with one customer in the near future, they say, and they're in several pilots. They'll sell the CM modules stand-alone, but as with Saville, they're integrated off the bat with their own (i.e., Amdocs') customer care system. This means that an Ensemble-equipped CSR in the inbound trenches knows when a caller is at high risk for churn. There is no need for a generic CRM infrastructure here, such as Seibel or Vantive offers.

Ensemble's CM modules help the analyst pinpoint his market, and decide best how to deploy resources: which business customer is worth dispatching somebody to visit, which is worth a telemarketing call, which direct mail. Campaign management, of course, is also used for targeting new customers.

As Ensemble pumps more sales and usage data into the algorithms, the predictive models become more accurate. The models accept other data sources as well, such as purchased lists. "If you run it frequently with new data, our system can capture changes in the dynamics of the market and produce better churn prediction," says Baleli. "You can put the carrier's incentive policy into the system, and the system will not only give you the probability of churn for a customer, but what incentive might prevent that churn."

In the words of their own literature, Amdocs employs artificial intelligence techniques, such as rule induction, statistical methods, and

neural networks to discover patterns of customer behavior. To a non-statistician, that means that I can ask the system to show me patterns of those who've bought voicemail service, say, in the past, with no preconceived notions of what those patterns might be. The system mines the data warehouse, turning up correlation with zip codes, age of customer, age of account, minutes of usage, or percentage of overseas calls, for example. Aha! A target is spotted. The germ of an up-sell or retention strategy may be planted.

The analyst can also insert behavioral variables that they have gleaned from personal experience into the models; perhaps knowledge of competing offers, or ethnic holidays, even. He can perform what-if analyses, expand the business rules to include more or fewer subscribers, and see what results have shown in the past. The included visual presentations are maximized for the telco marketplace (see figures).

[Figures ILLUSTRATION OMITTED]

Amdocs runs a rather daring trial with prospective telco customers of Churn Management. "Customers give us their database, which tells us up to the last month who has churned. Based on that information, we tell them who will chum in the following month," says Pinkas. Prospects only have to compare Amdocs' prediction with actual data of the following month to judge the accuracy of their crystal ball.

Amdocs' analysis tools have even received international recognition at a general data mining conference: the International Knowledge Discovery in Databases Conference (KDD-98), held in New York last August.

Ensemble runs mainly on Unix; although some parts run on mainframes and some on NT as well. Chum management and Campaign Management can run on NT, as well as the client sides of the CRM products.

Amdocs prices its system based on the size of its customer, and assumes responsibility for integration and training. Typically, Amdocs personnel remain onsite during implementation.

Kenan Systems

Kenan Systems (Cambridge, MA -- 617-225-2200), another one of the big-three B&CC names, has its own "decision support" module, which adds customer segmentation, churn/value reports, product management and campaign management to their core Arbor BP billing and customer care and Arbor OM ordering and provisioning system. The module is called Strategist and it's the only one of the big three we've seen to have an announceable customer: US West Long Distance.

Strategist, like other add-on tools, incorporates data from multiple sources, including its native billing system. Marketers also can analyze churn rates and customer lifetime value to target particularly valuable segments with customer loyalty programs and win-back incentives.

Customer analysis reports view the results of conducted surveys by product, geography or segment. Analysts can explore the relationship between any two factors, such as geography and gender or product and income level. The example given by Kenan: see if customers from a certain income level purchase PCS service, to see if you should target that group. Data mining here, too, reveals patterns of buying and churn behavior. Product management tools help marketers determine which products and services to bundle together, at which price and to which segments.

Strategist's server runs on Unix, clients are predictably Windows-based. The server also supports direct links to Oracle and Sybase. Alone among the big three, Kenan's billing and customer care products must run on top of a third-party call-center CRM product such as Seibel or Vantive; hooks to these are built into Arbor. David Rabkin, director of the

Decision Support Group, poses this as a simple integration.

Strategist can flag CSR screens when a customer is at risk for chum. It can also generate campaign lists for outbound contact, or pipe through a script appropriate to retaining that valued customer on inbound calls.

Kenan has about 100 licensees, ranging from new CLECS to France Telecom, for whom their system processes a billion CDRs per month. In April, the company was acquired by Lucent.

Rabkin explained that Strategist is configured slightly differently for each version of their billing platform; Arbor Wireline, Broadband, Mobile and Internet, because marketers look at different data and ask different questions in each business. Additional configurations can be added much like templates, as a carrier adds more services and products. "What allows us to do this is our deep experience in all these verticals," he says. "We know what their issues are." He walked me through some of US West Long Distance's processes to illustrate.

As a startup, USW LD is prohibited by federal regulation from using the historical data of its parent, US West. So to develop a basis for segmenting their market, Rabkin explains that they purchased models of lifestyle data: factors such as "Who owns guns? What do you drive? What SIC code are you employed in? Marketing analysts use that to create their own segmentation; customers they think are homogeneous in the marketing channel. Then they can go to town designing their programs." They can then start communicating with those prospects by creating lists, taking a test list to a telemarketing operation, and getting real results back. US West is preparing for a "full-bore" rollout of long distance by this fall. "Strategist lets them look not only at purchased data, but at honest-to-God behavior, trending over time," says Rabkin. "Who's likely to be disloyal? Who are profitable but disloyal? How can we increase loyalty? Who are not so profitable but loyal? How can we make them more profitable?"

"You can try to profile your loyal customer and use that as your basis [for marketing campaigns], and you can look at specific behaviors: Are customers ramping up the amount of long distance? Does that make them more attractive to competitors with higher usage plans? If so, you want to put them on another plan."

You also want to alter campaigns based on test results, and you want results back quickly, inside of two to six weeks, says Rabkin. "If you talk to telecom marketers today, they can't do that in under six months."

While Kenan's B&CC and Strategist do not provide all the CRM plumbing, they do solve the integration of OLAP (online analytical processing), and campaign management. It's priced in scale with a carrier's size; but entry-level here, for software license only, is on the order of $300,000; and a $1- to $5-million contract is more typical. They have relationships with several leading integration firms, including AMS.

LHS Group

LHS Group (Atlanta, GA -- 770-280-3100, and Frankfurt, Germany -- +49 [0] 6103-482-700) has over 140 BSCS telco billing and customer care systems installed in more than 60 countries. At the GSM Congress in Bern, Switzerland this February, they announced their new, backward-compatible object-oriented B&CC system, Targys. It's an add-on to BSCS 5.21 and higher.

Java-based, Targys provides browser-mediated functionality for remote agents and lets customers "care for themselves" on the web.

Targys will be CORBA 2.0-compliant, allowing fast bolting to third-party CORBA apps. It's got the three-tiered architecture that's

beginning to be trumpeted by several makers: Layer One for presentation logic, Layer Three for database, and Layer Two, in the middle, for application logic.

The first component of six to be rolled out this year, Targys Customer Inquiry has been deployed by Swisscom AG Mobile in Bern. Order management, Customer Care, Web service, Back office, and Corporate Account are to follow.

Saville Systems

Saville Systems (Burlington, MA -- 781-270-6500) took in $167.7 million in revenues last year and the price for their packages typically runs in the multiple millions. Latest contract announcements include Brazilian Netstream, Scottish Telecom, and Net2000.

We discussed Saville and their IP telephony aims back in January. While convergence alone should go a long way toward preserving customers, they've just announced a customer-care module, SavilleCare, addressing this issue. They're pitching it first to existing customers of their CBP Convergent Billing Platform. Going forward, they say, it will run with other billing packages.

As a call-center, sales support vehicle, SavilleCare competes with the Seibel's, Vantive's and Clarify's, but as Richard Aroian, VP marketing for the Americas, points out, it has the advantage of very fight integration with CBP's billing and usage history subsystems. It also benefits from having been developed from the ground up for its vertical telecom market.

It's all based on business rules. "If there's statistical information that says, for example, that the likelihood of a client leaving you goes up to x percent based on the increment of customer service calls, and the system makes that available to the CSR, then as you get near a threshold, the CSR sees that this is someone who's called us four or five times within the last 30 days. He or she needs to do something to keep that customer, like perhaps offer a discount," explained Aroian.

By the same token, SavilleCare can also show the CSR when the loss of this customer would not be a terrible blow to the carrier. He or she would know, then, not to waste too much time or risk offering incentives in hopes of retention.

Of course, SavilleCare accepts CSR entries as they interact with customers, adding to contact history. For each call, the system can highlight potential problem areas and potential upsell opportunities. It also lets organizations keep strict tabs on customer-specific service-level agreements.

SavilleCare Modules: Integration management, for external billing, customer care, workflow, order and inventory management systems; Inbound/Outbound call flow: this includes scripting for outbound telemarketing sales campaigns and interfaces to predictive dialers; Scripting and screen pops, too, for inbound calls; Work flow: to assign tasks to appropriate staff; Analysis: out-of-box searching tools for adhoc and regular reporting and immediate updates to service reps.

Aroian tells me that web-based customer self-care is in development at Saville. A very comprehensive solution, CBP runs on UNIX and AS/400 platforms.

MID-RANGE SYSTEMS

Billing Concepts

Billing Concepts (San Antonio, TX -- 210-949-7020) offers a B&CC package called Modular Business Applications, that runs on the IBM AS/400. It bills for LD, local phone service, wireless, Internet, cable TV and

utilities.

Billing Concepts has a long history as a clearinghouse and intermediary between LEC billers and LD service providers; they still have about 65 percent of that market. Their acquisition of CRM corporation bought them entree into the convergent billing software world. Their only nod to customer retention, aside from accurate bills, is the convenience and multi-relationship nature of convergent billing itself. Billing Concepts sells a site license or takes on the billing and customer care task as an outsourcer.

Daleen Technologies

Daleen Technologies (Boca Raton, FL -- 561-997-1612) offers BillPlex, which they say can produce bills for a subscriber base comprising over one million access lines. They go all the way back to 1989.

BillPlex has been benchmarked in its Unix configuration, using a 16-way Sun E6000 server, and 16 333 MHz processors, to bill 5.94 million usage records per hour. On NT, with a 4-way Xeon NT server and 12 Pentium 450 MHz processors, BillPlex billed 3.24 million usage records per hour, with capacity to support over 600,000 access lines per month. Both environments were running Oracle 8.0 RDBMS, and utilized EMC2 storage.

Daleen pitches BillPlex to optimists who may be starting with as few as 20,000 subscribers. System price scales up with customer base. Since any ratable usage data can be added, the software can bill convergently across multiple services.

Table-driven, BillPlex lets you introduce new services and marketing promotions quickly, and also put targeted promotions and incentives on printed customer bills. Release 2.1 has an optional web interface for self-care. 2.1 also comes with four canned market packages, for CLEC, LD, Wireless and IP and DSL services. "Lock-box" payment processing handles debits and credits to and from financial institutions. Open APIs allow BillPlex to bolt onto preexisting OSSes. For data mining and churn management, it supports interfaces to third-party vendors NCR, SLP, Redbrick, and GTE. For CRM support, bolt it to Siebel, Clarify, Vantive, Versatility, GERS, and Lightbridge.

Integrated with customer care, usage information to agents is near real-time.

Info Directions

Info Directions (Victor, NY -- 716-924-4110) is due out this month with their CostGuard 2.0 billing and customer care package. It's NT-based and aimed at startups who want to grow with their system.

Info Directions packs a lot of functionality into their scalable billing system (see last January's IPT billing story for more detail). Their contribution to customer retention and identification is a usage analysis tool called MarginGuard.

MarginGuard processes and aggregates usage records by month or year-to-date, giving views by customer, geographical region, product summary, sales/affinity group, or LATA.

CostGuard comes in three basic sizes. CostGuard AXS is a six LAN-client, 500-record-per second system, costing $90,000 to $100,000, and pitched primarily at switchless resellers. CostGuard Plus is a 200-client, 1,200 record-per-second system that costs about $1,000 per client. A multi-site, 200-plus-record-per second Enterprise edition, starting at $600,000, can serve up to 10 million customers. The top two run on SQL server; the low-end product on Microsoft Access.

MaxBill

MaxBill (Ramat HaSharon, Israel -- 972-3-547-2498) is a three-year startup offering an NT-based, convergent B&CC system with installations in England and the Continent. "Our system is rule-based, based on events that are easily user-configurable," says Michah Himmelman, president. "Our system has behind it a dynamic database that reacts to events such as a customer whose check bounces for the third time."

How about good customers? "In marketing, if a customer meets some kind of rule that validates him for specific types of discount, the system can automatically generate an offer letter or a message that will go into his next invoice." The Modular MaxBill package offers rating engine, task scheduling, customer care, general ledger, AR, and reporting pieces.

Preferred database is Microsoft SQL Server 6.5. Third-party tools can report traffic as often as hourly. A basic/minimal license fee, with customization, implementation, installation, and training is around $250,000.

Mind CTI

Mind CTI (Yokneam, Israel -- 972-4-003-7773 and Englewood Cliffs, NJ -- 201-569-6967) was written up in January for their NT-based IphonEX billing and customer care package. When they branched out from enterprise call management to telco billing, they aimed first at VoIP, where the great majority of their customers are still found.

But IphonEX can take records from a CO switch as well as a VoIP gateway. Lior Salansky, VP of Business Development, tells me that a PSTN version of IphonEX, called MindBill, has three installations to date: one a four-to-five-switch carrier in Italy, one a German reseller who gets data from four carriers, and one in Israel that gets data from cellular switches. Unlike IphonEX, Mind-Bill does not support prepaid bills. Other functionality is the same as the new IphonEX 3.1.

Remember that Mind's web-based (or LAN-based) agent screens categorize customers and graphically debit those with rechargeable cards, managing both limited credit customers, and unlimited credit customers. Remember, too, that web-based customer inquiry is also included with this mid-range product.

MindBill also lets you define (and report on) new customer fields. This release also adds a CRM module -- Customer Management Journal -- that handles registration, sales, and follow-up task assignment, color-coded to specific agents. It also documents all customer interactions, be they phone, fax, email, or entries to invoice, payment or adjustment tables.

Mind's built-in traffic analysis lets you see who makes the longest calls, and which destinations pull in the longest average call times. "You can do what-if analyses to see how new tariffs to those destinations might affect your revenue," says Salansky. "What if, after three minutes or ten minutes, I reduce the rate to that destination? That might encourage longer calls and higher revenue."

"Do a report of customers who've complained in the last month," suggests Salansky. With the CRM module, you can create a new outdialing or emailing campaign targeted at these at-risk customers.

MindBill starts at $50,000. While the NT version is suitable for hundreds of thousands of customers, a Unix version would support over a million. It's also based on Oracle database. Convergent billing is on their horizon, they say.

Proxima

Proxima (Montreal, Quebec -- 514-875-5403), with roots in cable billing, has come out with a new telephony, cable and IP convergent billing and customer care platform called ProMedia.

It's modular, scaleable, built from scratch, and has one installation to date; with EDS' carrier outsourcing center in Spain. Proxima's pitch -- its web site and white papers -- pays a lot of attention to the integration of billing with marketing. The customer profile occupies the center of the ProMedia model, its CRM screens are clear and comprehensive. Each customer category determines in part what products are available to the customer, what rates he or she pays, the terms and conditions of the service contract and tax liabilities. ProMedia's Marketing and Sales module helps create scripts and manage campaigns, promotions, trial periods, and purchaser "loyalty points". Reports can be generated with Crystal Reports (run-time included) or third-party tools can be used to present, measure and interpret variables such as market penetration, customer retention rates and acquisition rates. For the agent, ProMedia detects whether customers are good targets for additional promotions, and lets them drill down to see what additional products or services might be purchased to qualify for a given discount.

ProMedia also stores prospects. English, French and Spanish support is currently available, and the company plans to localize for German, Dutch, and Portuguese by year's end.

All invoicing, payment and usage history gets attached to customer profiles. Data can be stored in Oracle, Sybase, Informix and other databases, within reach of "thousands of tools" for analysis. "We let operators decide what information they want to keep on their customer profiles," says Sylvain Tetreault, Proxima's marketing manager. Optional fields might be number of extensions, televisions, or children.

Tetreault's example: An operator designs his business process and his customer profile to note children's ages. "If I as a [convergent] operator see a high percentage of these families, I decide to offer the Disney Channel for half price for Christmas week. Right away you can go into ProMedia, create the service at half price, and design a targeted mailing or telemarketing campaign. The information is there, accessed very easily." An alert is also raised to the CSR when a qualifying customer calls in.

Win-back scenario: "When someone leaves the operator, we keep a history of that person and the reason why he churned. If the operator decides to issue a new package at a lower price, he can extract all those who left for price and contact them." Frequent-flyer scenario: "The operator wants to credit one mile per five dollars of long distance usage, or per hour of Internet connection. Again, the system allows him to configure his business process to suit."

ProMedia uses IBM's VisualAge Smalltalk tool for object-oriented development of the Windows-based GUI and application layer. GemStone's object management system is used for running distributed objects in the application layer and for enterprise connectivity. Although GemStone includes an object-oriented database management system, RDMS technologies like Oracle, Sybase, Informix and DB2, may used as well.

ProMedia runs on major UNIX, as well as Windows NT server platforms. Cost? Tetreault posits a carrier with 100,000 subs who spends one million dollars up front on ProMedia's installation, integration and training. If his average revenue per customer, per month, is $30, and he increases that by only $2 because he is now able to cross-sell and upsell, he's recouped his investment in six months. Web-based bill presentment is in first draft, he says.

Choosing a Billing System: Not Just IT's Pick

Avi Ofrane's Billing College ends one of its courses with an exercise

on evaluating billing systems. "It's an eye-opener," he says, "because students' RFP's for billing systems typically describe their requirements in purely technical terms: Convergent, client/server, three-tiered, and the like. But that's a technology-centric view, one that does not follow through to end goals.

"Shift the emphasis from technology to the business requirement," he suggests. And make the prospective vendor speak in the same terms. "I don't care if your bills package has three tiers or seventeen tiers. If you're a telco, what you need to ask your billing vendor is: `how is it going to help me maximize my revenue?' If you [the vendor] can't tell me that, I want nothing to do with you."

Ofrane goes further, saying that it should not be just the job of the CIO to select a billing system. "This is a revolution," he says, and one that often comes smack against departmental territorialism. "We're trying to shift the emphasis to the business unit, to the financial guys. They're the ones responsible for evaluating performance, profitability, projections."

"We promote billing selection as a joint effort. When we offer an on-site course, we always request that the group of students not be homogeneous. Not just systems analysts. Send us your marketing, sales, product marketing managers, finance people, as well as business and systems analysts and programmers. These people will have a much better appreciation for what's needed. Some of our clients have thanked us for having changed the way they think."

Convergence Caveats

Carriers have to consider several issues before they plunge into "convergence," cautions Avi Ofrane. The first is consumer sticker shock: Customers who see a converged bill of $300 or more may pay more slowly or fitfully than those who see smaller bills in separate envelopes. Sticker shock may severely impact carrier cash flow. The second is customer service: If customers expect to resolve issues stemming from five different services via one 800 number appearing on their bill, CSRs must be equipped to handle all those different kinds of complaints and requests. They must have all-inclusive views of the customer, or seamless call routing intelligence that guides the caller to the appropriate agent, in short order.

Most at risk are carriers looking to incorporate billing for services that they don't actually provision themselves, such as cable TV. Ofrane: "Say you're adding pay-per-view to your bill from another supplier and a customer calls to tell you `I didn't watch that fight.' Are you taking on the pay-per-view company's call center headache?"

Outsourcing B&CC

Companies like Sprint PCS and parts of AT&T Wireless entrust all or part of their convergent customer care and billing functions to Convergys (Cincinnati, OH -- 513-458-1300), a company spun off from CBIS and Matrixx. Convergys can do as little as present bills (they do this for 60 to 70 percent of PCS bills in the US, they say), or as much as take over first-response customer service, with more than 30 call centers and data centers. Their software, some of which they license, is also equipped for churn prevention and quick-response marketing programs. Client telcos can institute new pricing programs in minutes, through on-line GUIs to their pricing engines. These programs can be finely targeted as well, for example, "only to new retail customers in Milwaukee via XYZ marketing channel," says Convergys' Brian Henry.

Web-Based Bill Presentment And Customer Care

The Yankee Group has research to show - at least in well-wired North America - that web-savvy customers are likely to be in your high-value group. They're more likely to use multiple services (Internet service is a given), have higher incomes, and prefer the time savings of self service over the "human" touch of phone. EBPP (Electronic Bill Presentment and Payment) is hot, and on-line access to bills is beginning to get play in consumer advertising. The business case for carriers is equally compelling, as it reduces CSR work load.

The Web can present bills or just allow customer "self-care," including bill inquiry ("was my last payment received?") and even some adjustments. Up to a certain dollar amount, it's cheaper to let customers adjust their bills themselves than to involve a CSR.

Web-based customer care also sacrifices nothing in churn prevention, upselling, and intelligence gathering. The web-based bill "recognizes" the logged-in customer, addresses him, and makes product offerings. Here's the almost insidious part: These offerings can be triggered by any combination of profiling factors, or by preferences tracked through previous web site clicks. Here's where all the web traffic analysis tools from the general e-tailing world come into play. (For the latest on that front, see "Web Site Mining Gets Granular," Internet Week, March 29.)

Web-based bills can be presented directly from a telco's own web site, or they can be aggregated through a consolidator. A consolidator could be a bank that offers a homebanking service, or an independent service like Intuit.com. Most telcos, if they're implementing this solution, rightly prefer to present billing information through their own web sites; gaining the opportunity to promote additional services, offload mundane CSR duty, and touch their customers.

We've turned up three telco-appropriate billing solutions that are entirely or heavily directed at web presentment: BillCast from Just In Time Solutions (San Francisco, CA -- 415-553-5505); the I-Telco version of I-Series from Blue Gill Technologies (Ann Arbor, MI -- 734-205-4100); and the software of Novazen (Longmont, CO -- 303-583-3100). As EBPP vendors, they have a great stake in proving the selling power of the web and their sites show it. Novazen's even graciously tells you about their competitors!

These demos (reached via novazen.com, bluegill.com, and justintime.com) are future classics of on-line marketing. Try them. Just in Time's shows telco billing as part of a consolidated bill presented by "Bay Area Bank." Click on your LD summary item and there's call detail sorted any way you like. Best: there's one-click reverse directory lookup, reminding you who you called in Phoenix last month.

Just in Time's Billcast products play in both direct-site and consolidator scenarios. Their BillCast Presentation Server sends HTML bills -- in all their drillable depth -- from the biller's own site. Customers access the bill securely with industry-standard SSL and unique RSA encryption. Simple HTML tags let the billet add any element to a bill template, with no programming skill necessary.

Just in Time's OFX server works in a consolidator scenario, sending only bill summaries to consolidators through the OFX (Open Financial Exchange) open standard for exchanging billing information. This is the "thin" consolidator model. But here again, if the bill payer wants to check detail records, he or she need only click on summary information. The OFX server directs the request back to the Presentation Server, which serves up the detailed information direct from the billet. Traffic is kept to a minimum, data security and hi-touch opportunity is kept with the billet,

and the consumer can still drill down.

Just in Time's solution also integrates with existing billing and customer care apps via direct API, staging server, or print stream conversion: few carriers can scrap mailed bills entirely and none can do away with all their CSRs.

BillCast's profiling engine records customer activities on the site, but the difference between general click-tracking software and BillCast is that it is immediately actionable. Answers to questions or clicks on web-presented promotions can generate dynamically generated HTML, personalized pages. "Billing begins to look less like a document, and more like an application," says Valente.

Telecom examples? "In looking at the billing data," Valente posits, "BillCast sees that you make a tremendous amount of instate calls. The site can send a web page that says, 'Would you like a wireless rate with no roaming charges inside California?'" Or more simply, it sees that your monthly tow-price minute bucket is near empty: Click here to buy an additional 100 minutes for ten dollars.

Just in Time offers NT and Solaris versions of their BillCast family. Their biggest news is a brand-new score with AT&T. That's 70 million consumers eligible for BillCast-powered online billing. The mega-carrier will start with the consolidator model. Just in Time is also the bill-presentment piece behind Intuit.com, one of the most popular consolidator sites.

Just in Time performs the customization for telco clients, provides the BillCast software and integration. So far, web-based customer care and bills are limited to residential and small business customers. Corporate customers' bills are too large and complicated to route through IP this way, and often are presented on CD. Such big customers are also less susceptible to churn, anyway.

Publisher Name: Miller Freeman, Inc.
Event Names: *220 (Strategy & planning)
Geographic Names: *1USA (United States)
Product Names: *4800000 (Telecommunication Services)
Industry Names: BUSN (Any type of business); CMPT (Computers and Office Automation)
NAICS Codes: 513 (Broadcasting and Telecommunications)
Special Features: INDUSTRY

- ...to the telco supplying complicated products (e.g., VPNs) to multinational corporations. On the other hand , they cost less.

They also generally don't come with sophisticated data-mining algorithms and...market packages, for CLEC, LD, Wireless and IP and DSL services. "Lock-box" payment processing handles debits and credits to and from financial institutions. Open APIs allow BillPlex to bolt onto...on) new customer fields. This release also adds a CRM module -- Customer Management Journal -- that handles registration, sales, and follow-up task assignment, color-coded to specific agents. It also documents...may pay more slowly or fitfully than those who see smaller bills in separate envelopes. Sticker shock may severely impact carrier cash flow. The second is customer service: If customers expect to resolve issues stemming from five different services via one 800 number appearing on their bill, CSRs must be equipped to handle all those different kinds of complaints and requests. They must have all-inclusive views of...

11760065

EAST P.A. MAN'S BODY FOUND IN ROME, HEADED TO MEXICO

San Jose Mercury News (SJ) - Tuesday, September 17, 2002
By: TRUONG PHUOC KHANH AND THAAI WALKER, Mercury News
Edition: Morning Final Section: Front Page: 1A
Word Count: 1,031

Text:
Leonor Zepeda could not say which was harder: losing her husband of 40 years, having his body inexplicably misplaced for 48 hours, or sending her children on Monday to identify their father's body in a casket that should have been buried three days before in his Mexican homeland.

The Bay Area family of Roberto Castaneda gathered at San Francisco International Airport on Monday to wait for the return of the silver casket that contained the patriarch -- and wait for answers to how their loved one, destined for Michoacan, Mexico, instead ended up in Rome.

The mix-up, which apparently was caused by an airline labeling error, was revealed Friday morning when the casket arrived in Michoacan and was opened by anxious relatives. The body was someone else's.

''How did this happen?'' Castaneda's widow, still in her mourning black, kept asking Monday morning from her home in East Palo Alto. ''I still can't believe it.''

Zepeda did not know where her husband's body was until 2 p.m. Monday. A Delta Airlines official called and said Castaneda's body was en route to San Francisco and asked the family to go identify the body at a cargo warehouse.

Mislabeling blamed

A Continental Airlines official told the Mercury News on Monday that the mishap occurred when the wrong shipping labels were placed on two nearly identical containers that held two caskets -- one with Castaneda's remains, the other with the body of a man who was supposed to have been flown by Continental to Ethiopia.

Castaneda was apparently sent on that route, instead; his body was discovered in Rome.

''There was a mix-up in the warehouse based on incorrect labeling by another carrier,'' Jeff Awalt, spokesman for Continental said. ''We've been working with everyone involved since we were notified of the mistake to correct the situation as quickly as possible.''

Delta Airlines was the carrier responsible for transporting Castaneda's remains to Mexico. His remains were stored in a cargo warehouse with other caskets and freight for a few hours before being placed on a plane.

Continental Airlines handles cargo warehouse operations for Delta at San Francisco Airport.

Neither airline publicly accepted blame, although family members said that Delta has agreed to cover all expenses for Castaneda's return to Mexico. His casket was scheduled to be flown to Mexico late Monday.

''It's not about where the blame goes at this point,'' said Delta spokesman Anthony Black. ''It's something that happened, and we're trying to rectify the situation.''

Charles Jones, owner of Jones Mortuary of East Palo Alto, which handledCastaneda's services and prepared his body for the flight, said his business had done nothing wrong.

''I feel very bad about it, but I did not make a mistake,'' he said. ''It is the airline that made a mistake.''

Castaneda's casket was the only one taken from the funeral home to the airport Friday night. The casket was placed in a shipping container that consists of a wooden tray bottom and a cardboard top, Jones said. It was secured with straps and his name was written on the top of the box with a felt-tip pen, Jones said, explaining a standard procedure.

A mortuary staff member delivered Castaneda's remains to a clerk at Delta Airlines' freight terminal. Jones said his staff has no access to the airlines' cargo area.

''We lose the chain of custody at the airport,'' Jones said.

Simple procedure

Kevin Flanagan, a spokesman for the state Department of Consumer Affairs, which regulates funeral homes, said there are no specific state rules governing the transport of human remains other than that the remains must be in a sound container.

Typically, when a funeral home brings human remains to an airline, he said, the funeral home submits paperwork that includes the death certificate and information about the deceased's intended destination. The paperwork, Flanagan said, can either be attached to the shipping container by the mortuary or handed to an airline clerk.

''It's not an unduly complicated process,'' Flanagan said. ''It's really like shipping anything else.''

Flanagan said his agency does not investigate mishaps of this nature, which he called rare.

''It does happen, but it's rare enough that it's still a shock when it happens,'' he said.

Weekend of worry

The back and forth over who was responsible only compounded the family's pain. On Friday, after being informed of the discovery in Mexico, the

family went to Jones Mortuary, where they were told the right casket had been sent.

The family then went to the airport. The family said Delta told them the mix-up occurred at the mortuary. Delta, however, said Monday they never placed blame on the mortuary.

The man who was mistakenly sent to Mexico was believed to have come from a mortuary in Oakland and was supposed to have been flown to Ethiopia, Jones and airline officials said Monday.

No other information was released about the man other than that his body was being flown to Ethiopia by Continental Airlines on Monday.

Just before 2 p.m. Monday, Castaneda's family was summoned to Delta's cargo area to speak with Delta officials and identify Castaneda. Luis Quinones, a son-in-law, said fresh tears were shed.

After a two-hour closed-door meeting in the cargo area, Jones emerged to proclaim that the family was ''satisfied'' with the result and that he was speaking on behalf of all parties.

But a half-hour later, Quinones came out and said the family was still distraught and would be in contact with a lawyer today.

Quinones planned to accompany the casket back home, as he did for the first trip to Mexico.

His father-in-law's dying wish, he said, was to be buried in his home state of Michoacan.

He intended to carry that wish out.

Caption:
Photos (2)

PHOTO NHAT V. MEYER -- MERCURY NEWS
Jones Mortuary director Charles Jones said the airlines were at fault, and Delta has agreed to pay for shipping the body to Mexico.
PHOTO NHAT V. MEYER -- MERCURY NEWS
Luis Quinones, a son-in-law of the late Roberto Castaneda, talks with reporters Monday outside the Delta cargo building at San Francisco International Airport after family members identified the body.

- ...was discovered in Rome.

''There was a mix-up in the warehouse based on incorrect labeling by another carrier ,'' Jeff Awalt, spokesman for Continental said. ''We've been working with everyone involved since we...

...caskets and freight for a few hours before being placed on a plane.

Continental Airlines handles cargo warehouse operations for Delta at

San Francisco Airport.

Neither airline publicly accepted blame, although...

...paperwork, Flanagan said, can either be attached to the shipping container by the mortuary or handed to an airline clerk.

''It's not an unduly complicated process,'' Flanagan said. ''It's...

8/K/8 (Item 1 from file: 148)
DIALOG(R)File 148: Gale Group Trade & Industry DB

09149958 Supplier Number: 18916150 (THIS IS THE FULL TEXT)
Extreme overbalance stimulations using TCP proppant carriers. (tubing-conveyed perforating system)

Snider, P.M.; Oriold, F.D.
World Oil , v217 , n11 , p41(6)
Nov , 1996
ISSN: 0043-8790
Language: English
Record Type: Fulltext; Abstract
Word Count: 4975 Line Count: 00415

Abstract: The tubing-conveyed perforating system with proppant carrier is an effective extreme overbalance stimulation method. It has been particularly successful in two different applications: first, the system provides a sound method for conducting prefracture evaluations, and second, the system has proven to be a viable method for improving near-wellbore conductivity in higher permeability intervals.

Text:
A tubing-conveyed perforating system incorporating a proppant carrier has been used in conjunction with extreme overbalance perforating for about two years. The system has been successful in several applications
The tubing-conveyed perforating (TCP) system with proppant carrier releases proppant and other particulates at the moment of detonation and allows materials to be injected into the producing interval while overbalance pressure levels and injection rates are maximized. Materials released at detonation are designed to enhance near-wellbore conductivity by scouring and propping the formation. About 120 stimulations have been performed with the TCP/proppant carrier system, and the majority of activity ((approximately)90 jobs) has been in Canada.

This article briefly describes the mechanics of the TCP/proppant carrier system, and then discusses field applications to date. Topics encompassed will be treatment designs in fluid - sensitive formations, stimulations near water, productivity comparisons to other techniques and recommended permeability ranges where the system has been successful.

The TCP/proppant carrier system has been a successful extreme overbalance stimulation method for several applications, including enhancing inflow performance of "higher permeability" reservoirs with low bottomhole pressure, reservoirs with near-wellbore damage due to mud and cement filtrate invasions and reservoirs with underlying water. Another area where this method has been successful is as a prefracture evaluation

technique.

Finally, the article addresses efforts to optimize and improve the technology, including use of fast gauge data, tracer logs and a combination perforating gun/propellant sleeve system. The combination system is currently being field tested by Marathon and a group of service companies as a joint development project, and has potential to be the next major improvement in extreme overbalance stimulation technology.

BACKGROUND

Marathon began using extreme overbalance stimulation methods suggested in early 1993.(1,2) Extreme overbalance stimulation methods initially began within the company by wireline or tubing-conveyed perforating the well with the entire casing and tubing volume containing pressurized liquids and minor amounts of nitrogen. These treatments were successful and quickly evolved to the conventional extreme overbalance TCP techniques and extreme overbalance surges. During this time period, nitrogen volumes were maximized while minimal amounts of liquids were injected into the formation; higher success rates were noted.(3) Engineers within Marathon envisioned that high injection rates through small-width fractures (particularly in sandstones) enhanced near-wellbore conductivity due to erosion of particles from the fracture face.

It was believed that including proppant or erosive particles with the high-energy fluid stream would either enhance scouring and/or subsequently prop the formation. Supporting data suggested skins could be reduced from an average of -0.5 to -2.5 by immediately injecting about 2,000 lb of sand, while injecting one to two tubing volumes of nitrogen.(4) This technique was used on a few Marathon jobs, but some individuals believed additional pumping could increase the risk of fracture growth into adjacent water bearing intervals. Also, it was believed that benefits of the proppant could be maximized if materials were included with the surge fluid (when overbalance pressure levels and injection rates were still at extreme levels). This led to development of the TCP/proppant carrier systems.

TCP/PROPPANT CARRIER SYSTEM DESIGN

Potential ways to include proppant with TCP operations eliminated use of viscous liquids to suspend solids based upon the following assumptions:

* Fluids for this application would have to be extremely viscous; it was not desired to place these polymers in the formation and risk formation damage
* Required suspension time was uncertain, and
* Expertise is not always readily available for fluid systems that could be expensive to purchase, mix and place.

A proppant carrier system was developed with Owen Oil Tools in which proppant is released simultaneously with gun detonation, Figs. 1 and 2.(5) The system uses a specialized explosive charge that opens the scalloped proppant carriers without damage to adjoining casing, Figs. 3 and 4. Proppant is released by the explosive energy and subsequent fluid stream rushing past the proppant carriers to the perforated interval. The carrier system had the following advantages:

* The system was relatively inexpensive
* Most equipment was standard and readily available
* Any length carrier could be used
* Servicemen could be trained to use the system
* Tracers could be added to dry proppant, if desired
* A wide selection of non-damaging fluid systems without polymer (such as alcohols and brines) could be used for the surge liquids, and

* The size and number of holes in the carrier can be varied to regulate proppant release rate.

Bauxite (20/40) has been used as proppant material on most applications to date because it is a highly erosive particle and provides high conductivity.

Several surface tests were conducted to ensure that specialized punch charges could place holes in the scalloped proppant carrier without damage to adjoining casing. Testing was conducted at both centralized and decentralized conditions. Very minor indentations on the casing wall (0.03 in., 0.75 mm) were noted when testing a 3 3/8-in. (85.7 mm) system inside 5 1/2-in. (140-mm) K-55 grade casing in a decentralized condition.

In field practices, it is recommended to always centralize proppant carriers to improve proppant release. This further reduces potential for casing damage. In some field applications, subsequent collar logs occasionally noted activity adjacent to where the punch charges fired. Investigation of this concern found that punch charges are changing the casing's magnetic field.

No jobs to date have shown any evidence of casing damage caused by proppant carrier charges. Some operators have even subsequently set a bridge plug below the punch charges and satisfactorily tested the casing.

INITIAL FIELD TESTING AND SYSTEM DEVELOPMENT

The TCP/proppant carrier system was initially field tested in Hill Sand, Haynesville field, North Louisiana, USA. Hill Sand is located at a depth ranging from 4,200 ft to 4,400 ft (1,280 m to 1,340 m) and is a fine grained sand with occasional limestone stringers. The sands were deposited as fluvial point bars, crevasse splay deposits and deltaic distributary mouth bars.

Hill Sand is known to be both acid and water sensitive. One past attempt to fracture stimulate a poor producer with a small foam frac resulted in communication to a nearby water interval. A planned recompletion attempt of the G. W. Taylor 4P No. 2 well provided an excellent opportunity to field test the proppant carrier system, since estimated bottomhole reservoir pressure was low, and sufficient underbalance with conventional TCP methods could not be achieved.(6)

Two primary concerns existed on the first field test. First, it was unclear if low-viscosity fluids would effectively transport high-specific gravity bauxite into the formation. Second, other individuals believed sufficient fracture width would not be developed during the short duration of the stimulation to allow this size of proppant to enter the formation. For these reasons, proppant material inside the carrier was radioactively tagged with a solid particulate.

The G. W. Taylor 4P No. 2 was perforated extremely overbalanced at 1.43 psi/ft, while using four barrels of a diesel-based surfactant system as the surge fluids ahead of the nitrogen. Fig. 5 details the four intervals perforated and other specific details of the job. The gun system fired when surface tubing pressure reached 5,271 psi due to nitrogen injection. Nitrogen injection was quickly ceased and surface tubing pressure fell to less than 2,200 psi in about 15 sec.

While reservoir rock quality of Hill Sand in the area is certainly variable, production rates achieved were excellent and encouraged further use of the TCP/proppant carrier system. Other wells required artificial lift either immediately or within a few weeks, while the G. W. Taylor 4P No. 2 was capable of 600 bopd with no water (three times the state allowable) for several months.

Gamma ray logs, production logs and pressure build-up surveys were all

run on the well about two weeks after production was initiated. Fig. 6 shows results of the tracer log. High radioactivity is noted in the second and fourth lobes, and reasons for the non-uniform distribution of the radioactive material remain puzzling. Several possible interpretations of this information include:

* Only the second and fourth lobes accepted proppant
* Radioactive material was flushed past the gamma ray logging tool's depth of investigation in the first and third lobes
* Radioactive material was produced back from the first and third lobes prior to logging, and
* The radioactive beads (16 total) were not uniformly distributed with the proppant.

Further work was conducted on subsequent wells to confirm that proppant is entering the formation and will be discussed in the next section.

Production logs run in the G.W. Taylor 4P No. 2 observed that the vast majority of all production was from the fourth lobe, which is also the zone with the best response on pulsed neutron logs that were run in this old well. A pressure build-up run on the well exhibited wellbore storage and well-bore phase redistribution. Due to questionable gauge resolution in the high permeability reservoir, a quantitative analysis was not performed. A qualitative analysis suggested "the reservoir has high permeability and the wellbore is in excellent condition."(7) The pressure build-up indicated the well was producing 90 bopd with 30 psi drawdown.

After initial field testing on two Hill Sand wells in North Louisiana, the TCP/proppant carrier system was licensed to Advance Completion Specialists and their Canadian affiliate (Canadian Perforators), and subsequently to Halliburton. The vast majority of all applications to date have been in Canada.

PROPPANT PLACEMENT INTO FORMATION

Further field applications of the TCP/proppant carrier system have confirmed that proppant enters the created fracture systems (if the job is executed as designed). At least two Canadian wells have been stimulated in which radioactively tagged proppant was contained in the carrier, and subsequent logs observed the radioactivity in the formation. On jobs where proppant carriers are retrieved from the well, carriers are empty or nearly empty, and subsequent tag runs find little to no evidence of proppant in the rathole. Proppant volume is many times greater than the perforation tunnels' volume.

All of these factors suggest sufficient fracture width is quickly developed on most of these stimulations to allow the 20/40 proppant currently being used to enter a created fracture system. Marathon now has a program underway to collect fast pressure gauge data (20,000 data points per second) to better understand the fracturing mechanics associated with these and other extreme overbalance stimulation methods, such as surges and propellant stimulations. On some future jobs, use of larger proppant materials, such as 16/20 proppant, to improve overall stimulation results will be considered.

PREHYDRAULIC FRACTURE EVALUATIONS

In Canada, at least 20 applications of the TCP/proppant carrier system were used as a prehydraulic fracture evaluation technique. Past experience in many tighter formations found that underbalance perforating methods have not resulted in sufficient formation fluid influx to properly design a major fracture stimulation. The reason for absence of inflow in specific

cases of underbalanced perforating is, generally, due to deep drilling mud and cement/cement filtrate invasion. The extreme overbalanced techniques with proppant carrier appear to have success in fracturing past the damaged area and creating a path for subsequent formation fluid inflow.

The operator needs to realize that the extreme overbalance technique is only a near-wellbore stimulation method and will not replace a large-volume hydraulic fracture stimulation. Prefracture evaluation represents a growing application of this technology in reservoirs with marginal permeability (0.5-10 md) and reservoirs with questionable content, water vs. hydrocarbons.

Prefracture evaluations using the TCP/proppant carrier system have resulted in, at least, significantly lower breakdown pressures during the fracture and, at best, recovery of formation fluid samples resulting in modified or canceled further stimulation. Some examples of this include:

* A Cadomin formation well in which the system was unable to establish a breakdown pressure and canceled a future stimulation
* A Codotte formation well in which the proppant carrier system obtained water influx; a subsequent major fracture stimulation confirmed the result
* A Gething formation well in which good flow was obtained (water), and the fracture stimulation was canceled
* Gething and Glauconite formation wells in which no inflow was obtained and fracture stimulations were canceled
* A Gething formation well in which good inflow of hydrocarbons was achieved and a hydraulic fracture stimulation was canceled
* Two Viking formation wells where the system was used to obtain an estimated 50% reduction in evaluation costs of nine zones. The operator found that the system could effectively contact the natural fracture system without needing to pump small hydraulic fracture stimulations to bypass deep mud and cement invasion, and
* A Mannville formation well in which gas inflow was obtained, and a fracture stimulation was subsequently designed and pumped with better design data.

The previous examples are considered successful operations by the data obtained, saving further expenditures rather than the traditional success mind set of enhanced production.

APPLICATIONS FOR NEAR-WELLBORE DAMAGE

The TCP/proppant carrier system has been used on about 70 wells to enhance near-wellbore conductivity. Several applications can generally be categorized as attempts to bypass near-wellbore damage. One of the best examples where the TCP/proppant carrier system has been successfully applied is a Belloy Sandstone well in Northwestern Alberta. The operator provided good well and offset data that made a technical analysis possible.

The well was drilled in June 1994. During the completion, the well was stress fractured, and swab rates increased from 48 bopd (0.32 (m.sup.3)/hr) with a fluid level at 5,280 ft (1,610 m), to 105 bopd (0.7 (m.sup.3)/hr) with a fluid level at 5,050 ft (1,540 m). The midpoint of perforations was 5,800 ft (1,768 m). Initial production rates quickly declined to 45 bopd and continued to decline. A pressure build-up on the well indicated a skin of +3 to +30, a relative permeability to oil of 31 - 49 md and no evidence of any stimulation. Fracture modeling by the service companies indicated 4-ton and 15-ton skin fractures could potentially increase production 3 - 5 fold, but close proximity of water in the underlying formation made it risky to conventionally fracture stimulate the well.

The well was stimulated with the proppant carrier system in the manner

described below, and production increased from 30 bopd (5% water cut) to 150 bopd (20% water cut). A negative skin was subsequently found on the well. Job design specifics are:

* A 2-m interval was reperforated (18 spm, 60 phasing, 36 gm charges)
* Some 4.5 m of proppant carrier (200 lb of 20/40 bauxite) was used
* Some 250 m of acid (inside 2 7/8-in. (73-mm) tubing) was used for the spear fluid
* Guns fired at 7,500 psi (52 MPa) surface pressure while using a tree saver, and
* Surface pressure dropped 2,800 psi (20 MPa) in 30 sec.

Three surrounding offset wells had 2-3 fold higher permeability (greater than 100 md from core data) and about twice the reservoir thickness, yet production rates are similar to the well restimulated with the TCP proppant carrier system.

Some applications of the system to bypass near-wellbore damage have allowed comparison to open hole drill-stem tests (DST). One recent well had an open-hole DST rate of 1 MMcfd at 50-psi flowing tubing pressure, while the producing rate subsequent to the proppant carrier stimulation was 1.5 MMcfd at 1,000 psi flowing tubing pressure. Pressure build-up data has yet to be obtained on this recent completion.

It is important to emphasize that data to date indicates the technique appears to have better success as a near-wellbore stimulation method in sandstones where permeability is at least 2 md. Higher permeability reservoirs appear to respond better (5-10 md formations, minimum, are preferred). Job data to date indicates the technique is as effective as a 2-ton skin fracture, but certainly will not obtain equivalent producing rates to a major hydraulic fracture stimulation.

APPLICATIONS WITH NEARBY WATER OR GAS

Several TCP/proppant carrier stimulations have been performed in wells where it is undesirable to perform a fracture stimulation (including skin fractures) due to proximity of underlying water or overlying gas. Job recommendations when using the TCP/proppant carrier system generally suggest that additional pumping be minimized to prevent height growth of the created fractures. Some 15 applications have been completed in Canada. This approach has been successful 85% of the time in producing the desired hydrocarbons with little or no water from nearby zones, suggesting that the short duration extreme overbalance stimulation is staying in zone to a greater extent than some believed.

JOB RECOMMENDATIONS

Job designs, based on experience to date, suggest higher success will be achieved by higher treating pressures and maximizing nitrogen (or compressible gas) volumes to increase overall system energy. As nitrogen expands and liquids and proppant are forced below nitrogen into the formation, fluid injection rates are quite high. Frictional pressure losses can apparently become substantial in smaller-inside-diameter tubulars or with large liquid heights in the tubing below nitrogen. For these reasons, and to limit liquid height inside the tubulars to 500 ft or less when using 3.5-in. (89-mm) or smaller tubulars, a minimum overbalance gradient of 1.4 psi/ft of TVD is currently recommended.

Liquid volumes below nitrogen are minor, and economic impact of selecting the most non-damaging fluids available is insignificant to the overall project. Considering that these liquids are injected deep into the formation, jobs to date have recommended produced offs, C(O.sub.2), methanol, brines with alcohol or acids (with prior lab work) be used. All

of these surge fluid systems have been successfully used, as have brines without alcohol and some other fluid systems.

While most wells in Canada using the TCP/proppant carrier system are relatively shallow, some U.S. wells are at a depth where it is not feasible to pressurize tubulars above surge liquids with only nitrogen. These jobs were successful in increasing bottomhole treating pressure gradients by pressuring the tubing with nitrogen to a certain level, and subsequently bullheading additional heavy non-damaging liquids on top of nitrogen. During the job, it appears liquids were remaining above nitrogen. Jobs designed in this manner attempt to limit hydrostatic pressure of liquids above nitrogen to a value significantly below anticipated reservoir pressure to minimize their entry into the formation.

On a recent successful TCP/proppant carrier stimulation of a deep well in Canada, liquid C(O.sub.2) was used as the fluid bullheaded on top of the nitrogen column to provide additional insurance that no undersized liquids would contact the formation. In deep wells, C(O.sub.2) may replace the nitrogen column, thereby effectively achieving the desired pressure gradient of 1.4 psi/ft (32 kPa/m) without excessively high wellhead pressures.

Tubulars are always recommended to be anchored to the wellhead/BOPs in the event a catastrophic tubular failure were to occur while the tubing is full of pressurized gases. An operator in the U.S., using a conventional TCP system with extreme overbalance, parted a joint of lower grade tubing that had mistakenly been run in the string. The tubing (only landed in the rig slips) parted under pressure, and about 1,000 ft (300 m) of it was blown from the well.

JOB PROBLEMS ENCOUNTERED TO DATE

Few mechanical or operational problems have been encountered, but it is important to report failures as well as successes. The perforating system appears to have properly perforated the formation on two wells, yet the formation did not break down as anticipated. The reasons for this are puzzling, as overbalance levels were significantly above estimated fracture gradient and, in one instance, the formation could easily be broken down after the well was produced for a few hours.

Current beliefs are that the perforating event created a filter cake of crushed and damaged rock so extensive that fluid leak-off to fracture the formation could not occur. This is an area for further technical understanding and investigation. Marathon and Halliburton have a research project underway examining the amount of crushed rock grains and their particle size distribution as a function of charge design configurations.

On some initial jobs, proppant was not fully released due to a thicker-wall scalloped carrier being used than the punch charge was capable of rupturing. As is the case with any new technology, this problem was easily solved and has not reoccurred.

A packer failure occurred on one well, which was later attributed to the packer being improperly set initially.

Planned development activities to further understand the TCP/proppant carrier system technology and its proper applications include the establishment of a job database. Because this technology is in its infancy, all licensees are required to complete a detailed job summary on each well.

A database is currently being created to better apply the technology and determine what types of applications were conducted in the past. The database can be quickly searched to determine specific information on job design questions as well, i.e., has Brand X's 5,000-psi retrievable packer ever been used inside 5-in. casing? Marathon has developed an Excel 5.0

static overbalance design program to calculate pressures throughout the system as a function of nitrogen and liquid injection.

Dynamic fracture modeling program. Efforts are also underway to develop a dynamic fracture modeling program to further optimize stimulation designs. Nitrogen expansion and high-rate frictional calculations are being merged into a version of Marathon s GOPHER 3-D fracture model. This effort will require a better understanding of the number of created fracture planes; and a directional radioactive logging program is planned to evaluate the number of fracture planes created under down-hole conditions with extreme overbalance stimulations.

The previously mentioned program to acquire fast gauge data on extreme overbalance jobs is designed to assist in development and verification of a dynamic fracture model. Current data on pressure rise times and directional radioactive logs suggests the current approach to job designs is likely to result in only a two-wing fracture, similar to what would be anticipated in hydraulic fracturing.

Combination perforating gun/propellant sleeve systems ("Stim-Gun" system). To increase chances of fracturing all perforations, recent extreme overbalance technology efforts have focused on developing techniques to increase pressure rise time and maximum peak pressure during extreme overbalance stimulations. Marathon, Owen Oil Tools, Computelog and HTH (a propellent manufacturer) have filed for patent protection on a joint-venture development project. A new perforating system called "Stim-Gun" has been developed which combines outer gas generating propellent sleeve(s) around conventional hollow carrier perforating gun system(s), Fig. 7. A sleeve of solid propellent (which looks similar to a piece of PVC pipe) is placed around the outside of any conventional perforating hollow carrier prior to being run in the well, as shown in Fig. 8. When the perforating gun is detonated, the perforating jet ignites the propellent sleeve as the jet penetrates the outer wall of the hollow steel carrier.

The combination perforating gun/propellant sleeve system is being field tested in 16 Marathon wells in a Wyoming field. Fast gauge data will be obtained on these jobs, as was previously obtained on conventional propellent stimulations performed on some 30 other wells in the same field. During initial field testing of the combination perforating/propellant system, pressures greater than 8,000 psi were generated for 1-2 msec in a 3,500-ft well, which will create multi-wing fractures in the near-wellbore area.

Companies involved in the project believe this combination system has application for wireline perforating, as well as enhancing success of the TCP/proppant carrier extreme overbalance stimulations. The propellent sleeve may be relatively inexpensive to manufacture in mass quantity and can easily be attached in the field to the outside of most perforating carrier systems. The next phase of fieldtests will likely focus on conducting tests of a TCP gun/propellant sleeve system in unconsolidated sand formations as a method to enhance injectivity prior to gravel packing operations. Future design efforts will progress towards changing the perforating charge designs to create less damage to the formation while using propellent and other extreme overbalance stimulation methods to extend fracture systems.

CONCLUSIONS

The TCP/proppant carrier has had success in two different applications. First, the system provides a good method to conduct

prefracture evaluations. If the operator realizes that the TCP/proppant carrier system is only providing a near-wellbore stimulation, the system is economically attractive to obtain formation fluids to either continue or cancel a much more expensive stimulation. If a larger stimulation is required, sufficient formation inflow has been achieved to obtain design information.

Second, the system has proven to be a viable method to enhance near-wellbore conductivity in higher permeability intervals (minimum 2-5 md). These near-wellbore stimulations have had good success at treating existing perforations without connection to adjoining intervals that may be water productive. Removal of near-well damage has been a successful application of the system.

Jobs to date suggest 20/40 proppant is effectively entering the formation during the stimulation. Tracer logs indicate proppant entered the formation, carriers are empty upon retrieval, and proppant is not found in the rathole after a job. It must be entering the formation. This conclusion is not easily accepted by some fracture design experts, and the industry should conduct further investigations in this area. Operators should consider using even larger proppants in certain future applications.

Collecting data on this new technology is critical to developing a better understanding of its applications and relative value compared to alternative methods. A method has been established to develop a database for each proppant carrier stimulation that is conducted on a worldwide basis. Dynamic fracture modeling of the EOB stimulations, and developmentof a perforating gun/propellant sleeve system, are believed to be the next major technology.

ACKNOWLEDGMENT

The authors would like to thank the Petroleum Society of Canada and the Society of Petroleum Engineers for allowing alternative publication of certain portions of this paper (CIM 96-82 and SPE 35321). In addition to recognizing the management and engineers of Marathon, Owen Oil Tools and Canadian Perforators for support of this project, Barry Lloyd in Marathon's Tyler office and Bob Whisonant in Marathon's Cody office deserve special recognition as engineers willing to take professional risks associated with application of new technology and initially field testing the TCP/proppant carrier system and the perforating gun/propellant sleeve systems, respectively. Special thanks to Prairie Wireline in Montana and Proppant Technologies Inc. (Houston) for donating goods and services, as well as maintaining project confidentiality. Davin Chandler and Samson Canada are recognized for providing comparative well information and encouragement.

LITERATURE CITED

1 Handren, P. J., T. B. Jupp and J. M. Dees, "Overbalance perforating and stimulation method for wells," paper SPE 26515.

2 Dees, J. M., and P. J. Handten, "New method of overbalance perforating and surging of resin for sand control," paper SPE 26545.

3 Snider, P.M., F. R. Hall and R. J. Whisonant, "Experiences with high energy stimulations for enhancing near-wellbore conductivity," paper SPE 35321.

4 Personal conversations between P. M. Snider, and J. M. Dees.

5 Patent pending, Marathon Oil, Trademark POWR*PERF.

6 King, G. E., A. Anderson and M. Bingham, A field study of underbalanced pressure necessary to obtain clean perforations using tubing-conveyed perforating, paper SPE 14321.

7 Internal Marathon report by W. C. Chu, PhD.

8 Oriold, F. D., and P. M. Snider, "TCP proppant carrier systems for

extreme overbalance perforating: Experience to date," paper CIM #96-82, presented in Calgary, Alberta, Canada, June 1996.

The authors

P. M. (Phil) Snider is an advanced senior engineer in Marathon's Drilling and Completion Technology group in Houston. His primary focus is assisting Marathon's engineers throughout the world in enhancing well productivity and transfer of new technology, with particular emphasis on perforating. He graduated from the University of Wyoming (BS petroleum engineering, 1979) and has worked for Marathon in drilling, reservoir and production engineering, and well completions supervisory positions in the Rocky Mountains, Alaska and Gulf of Mexico. He has numerous patents and has published previous papers related to perforating and completion technology.

F. D. (Frank) Oriold is President of Canadian Perforators in Calgary, Alberta, Canada. He has degrees from Southern Alberta Institute of Technology and certificates in business development from the University of Calgary. Prior to joining Canadian Perforators, he worked for Vann Systems for seven years in various capacities, including division manager, and was responsible for design and installation of TCP completions in Western Canada, the Arctic and Canada's East Coast.

Special Features: illustration; chart; graph
Industry Codes/Names: OIL Petroleum, Energy Resources and Mining; BUSN Any type of business
Descriptors: Oil and gas exploration--Technique
Product/Industry Names: 1382000 (Oil & Gas Field Exploration Svcs)
Product/Industry Names: 1382 Oil and gas exploration services
File Segment: TI File 148

...is executed as designed). At least two Canadian wells have been stimulated in which radioactively tagged proppant was contained in the carrier , and subsequent logs observed the radioactivity in the formation. On jobs where proppant carriers are retrieved from...and Samson Canada are recognized for providing comparative well information and encouragement.

LITERATURE CITED

1 Handren , P. J., T. B. Jupp and J. M. Dees, "Overbalance perforating and stimulation method for wells," paper SPE 26515.

2 Dees, J. M., and P. J. Handten , "New method of overbalance perforating and surging of resin for sand control," paper SPE 26545...

8/K/9 (Item 2 from file: 148)
DIALOG(R)File 148: Gale Group Trade & Industry DB

08245456 Supplier Number: 17623879 (THIS IS THE FULL TEXT)
Hot summers, sizzling room air.(1996 room air conditioners)(Industry Overview)

HFN The Weekly Newspaper for the Home Furnishing Network , v69 , n42 , p97(1)
Oct 16 , 1995
Document Type: Industry Overview
Language: English
Record Type: Fulltext; Abstract
Word Count: 1507 Line Count: 00122

Abstract: The new air conditioners for 1996 will feature product enhancements rather than major product changes. Amana will decrease the sound of its air conditioners through better insulation and more precise temperature controls. Carrier will introduce two new brands for specific markets, Bryant and Freyven, with its other product lines remaining the same. Delonghi plans to increase its distribution channels and its portable products.

Text:
Leading manufacturers are hitting the streets with their room air conditioners for the 1996 season. With low inventories after three hot summers, the product lines reflect more fine-tuning than radical changes. Under the circumstances, almost anything that blows cold air could sell for next year. Yet competitive pressures force continual updating of product features. Good air distribution, quiet operation, modem styling and convenience are primary selling points, and whether the consumer is avid or not, energy efficiency keeps getting better.

Other trends to be noted are more electronic controls: greater reliance on colorful merchandising cartons, and more micro-managing of specific models to reach targeted demographic groups.

Based on information provided by the manufacturers, here is a summary of 1996 product lines.

Amama: The premium Quiet Zone line comes with electronic controls, a program to eliminate short cycles, more precise temperatures and more insulation for improved sound. One model steps up from 8,000 to 9,000 BTUs and adds 1.5 points to its energy rating.

Altogether there are eight Quiet Zones, nine Cool Zones and seven through-the-wall units. Capacities span from 5,400 to 20,500 BTUs and energy-efficiency ratings run from 8.5 to 10.5. Nine machines carry EERs of 10.0 or more. Amana also promotes its two-year warranty, said to be unique.

Carrier: The basic line remains intact, but two additional brands are being offered for targeted markets. Freyven, described as Carrier's second label in Mexico, is moving north with an abbreviated line primarily for Hispanic communities. Bryant is a more traditional series for commercial applications and little retail appeal.

Overall Carrier counts 22 cooling units with capacities from 5,000 to 32,500 BTUs. Five heat-and-cool models run from 10,000 to 24,000 BTUs, and four heat-pump machines are rated from 10,000 to 18,000 BTUs. With the depleted stocks after the hot summer, merchandise has been put on early availability.

Danby: The Canadian company will offer 16 models in three series. Its highlights are four-function portable units: oscillating machines on casters with 3,200 or 7,500 BTUs, three-speed fans, 1,200-watt electric beaters and dehumidifiers. These are part of the Specialty series, also consisting of two vertical models for slider applications.

The step-up DesignAir series has been revised. All have slide-out chassis. A molded cabinet will appear first on a 5,000-BTU model with a carrying handle. Other features include oscillating sweep and improved efficiency to 9.7 EER.

Most of the competitively priced Danby series runs about 9.0 EER. All offerings are in Euro-gray.

DeLonghi: The portable line will expand to three units next year and distribution will grow beyond retail channels. Model Pac-02 cools with an air system instead of water; the Pac-50 has water-and air-cooled systems, each with a condenser. De-Longhi's Pac-GSR is a more powerful split unit:

at 11,000 BTUs, it can be used for commercial applications.

Plans to diversify distribution include business with contractors; builders, and even schools and hospitals where standard air conditioning cannot be installed in laboratories.

Fedders: Small-frame Fedders and Emerson Quiet Kool units are featured: one model with each label is 5, 100 BTUs and 9.5 EER; another is 10,000 BTUs in that little box. Med-frames get a new chassis with slide-in capability. Capacity has been increased in some larger sizes.

Befitting Fedders' intention to provide one-stop air-conditioning shopping, the flagship brand offers 27 models from 5,000 to 32,000 BTUs. More contemporary gray and less woodgrain is the fashion story. Emerson counts 30 models and essentially mirrors the Fedders line. Airtemp units for two-step distribution fit in all the chassis configurations.

Friedrich: After the big line revisions a year ago highlighted by the fuzzy-logic Quietmaster introduction, changes for '96 amount to fine-tuning. Again the line consists of 51 models. Quietmasters reportedly add "permanent memory"--no matter how longpower is out, they will revert to the last settings when electricity is restored. Two Quietmasters have been increased in capacity, including 18,500 BTUs from 18,000.

In the Portable series, an 8,000-BTU unit moves from 9.6 to 10.0 EER. Every model from 5,000 to 8,000 BTUs among Q Stars is rated at a minimum of 10.0 EER. Heat-cool Wallmasters have been upgraded with an automatic cycle coordinating the fan and compressor. A slider-casement unit at 10,000 BTUs steps up to 9.5 to 9.0 energy rating.

Frigidaire: New for '96 are additional intermediate models with an improved air-flow design said to offer more even distribution. The company also is touting "exceptional quietness in operation" for these units and its compact sensor models, the White-Westinghouse and Frigidaire W/FAC056T74.

White-Westinghouse's line consists of 29 SKUs: two low profiles, eight compacts, four intermediates five heavy-duty, two casement and eight through-the-wall. EERs exceed 9.4 on 16 models. The Continental series comes in three-color cartons.

Among 13 Frigidaire-brand SKUs, two are low profiles, four are compacts, three are intermediates and four are heavy-duty. Seven models exceed 9.4 EERs. The Gibson dozen is divided among one low-profile, four compacts, two intermediates and five heavy-duty.

GE: The line was described as similar to this year's with focus on EERs. Among 18 SKUs, three are new models with upgraded energy ratings. The step-up replacement units are a 5,000 and a 6,000 BTU, each at 9.0 EER and a metal cabinet, and a 24,000 BTU carrying an 8.7 energy rating.

Goldstar: An expanded program is built around a completely new line of 12 models. Capacities still are 5,000 to 21,000 BTUs, but now there are two units in most sizes to hit high and higher EERs. There's an 8,000 and another 5,000.

According to the company, the big selling point is an innovative filter system. To contain dust, a fold-down or -up door exposes the entire filter surface, and the dirty filter can be lifted straight out. Most models also have germicidally treated filters for cleaner air.

Goodman: For its second season, five slide-out models with portable chassis are being added to the initial line. Janitrol and Hamilton Electric brands primarily for retailers and Goodman and GMC units for distributors span from 4,800 to 23,500 BTUs in 24 models.

Next year choices will be offered in most capacities: High-efficiency

(usually 10.0 EER) models will be duplicated in step-down (usually 9.0) machines to hit price points in regions where rebates are not important. Information will be available later on through-the-wall and split units to ship in the spring.

Matsushita Changes for next year affect three Panasonic models and one Quasar unit. Each becomes all-white--no more woodgrain or black accents--and adds through-the-wall capability. These are the Panasonic CW-1406BU, CW-1805SU and CW-2005SU (the last numeral of each is two digits higher than this year's model number), and the Quasar HQ2142KH (replacing the -GH).

Again Panasonic's focus is on the 3inOne compacts measuring 17 23/32 inches wide. The Deluxe units are rated at 5,800 and 7,800 BTUs with 10.0 EERs. Three other Deluxe models step up to 13,500 BTUs. There are three Compact machines and and four in the Standard series from 5,000 to 20,300 BTUs and 8.0 to 10.0 EERs rounding out the line.

Quasar's narrow equivalents are two Cool Saver models and the same Standard and Cool Look compact lineup. However, there's only one other Quasar Deluxe model, the 2142, with 13,500 BTUs.

Sharp: Comfort Touch is a new series of five touchpad models. With an emphasis on convenience, features include three cooling speeds plus fan; 1-degree temperature increments from 64 to 86 degrees; 12-hour delays; energy-saver operation, and one-touch filter removal. Vital statistics are 5,500 to 12,000 BTUs and 9.2 to 10.0 EERs.

Altogether there are nine new models and two revisions from this year. The entry-level AF-500X provides one cooling speed, a mounting kit, 5,000 BTUs and 8.0 energy rating. Remaining units cover the gamut from 5,100 to 18,700 BTUs and 9.0 to 10.0 energy ratings, and are equipped with three speeds, thermostat, one-touch filter and mounting kits. Two of these air conditioners, the AF-1406X and AF-1906, are slide-out models with four-way directional controls and energy-saver.

Whirlpool: The Value series for the Whirlpool brand adds two models, the ACM122XE with 12,000 BTUs and 9.0 EER, and the ACM152XE with 15,000 BTUs and 10.7 EER. All Value units sport easier-read control-panel graphics and updated styling for a unified family appearance.

The Roper line is unchanged. All of the company's cartons feature improved sizing charts for self-merchandising and stronger messages to consumers about the need to choose the proper capacity.

Special Features: illustration; photograph
Industry Codes/Names: HOME Home Furnishings
Descriptors: Air conditioning equipment industry--Marketing
Product/Industry Names: 3585630 (Room Air Conditioners)
Product/Industry Names: 3585 Refrigeration and heating equipment
File Segment: TI File 148

...remains intact, but two additional brands are being offered for targeted markets. Freyven, described as Carrier 's second label in Mexico, is moving north with an abbreviated line primarily for Hispanic communities. Bryant is...

...A molded cabinet will appear first on a 5,000-BTU model with a carrying handle . Other features include oscillating sweep and improved efficiency to 9.7 EER.

Most of the...

8/K/10 (Item 3 from file: 148)
DIALOG(R)File 148: Gale Group Trade & Industry DB

06798618 Supplier Number: 14667466 (THIS IS THE FULL TEXT)
Populism + telecommunications = global democracy. (how mergers between telephone companies and the cable television industry are changing the future of international communication and information services) (Cover Story)

Freeman, Neal B.
National Review , v45 , n22 , p50(2)
Nov 15 , 1993
Document Type: Cover Story
ISSN: 0028-0038
Language: ENGLISH
Record Type: FULLTEXT; ABSTRACT
Word Count: 1781 Line Count: 00139
Abstract: Advances in digital communication technology have begun to blur the distinctions between telephone, TV and electronic communication services. The greatest impact will be upon social behavior as increasing numbers of people can get their information from the same sources.

Text:
AFTER YEARS of hype and hope, the old communications barriers of time and distance are beginning to crumble as dramatically as the Berlin Wall. The digital era of communications is here, and its essence is this: vastly more people will have vastly improved access to vastly more information.

The presumptive consumer benefits of this shift from analog to digital have been widely advertised: video phone calls, movies on demand, the Library of Congress accessible by home computer, bill-paying and plane-booking, and so on. No doubt the market will surprise us all as it sorts out the real values from the entrepreneurial passions. But the hard news is that the data superhighway is being built and it should be open for business before Messrs. Clinton and Gore have time to fund it or the opportunity to manage it.

Just who will come after they build it is less clear. Consider the megadeals of the last few months.

Southwestern Bell buys Hauser Communications for $650 million. Here we have a Regional Bell Operating Company (RBOC) buying cable systems in the territory of a sibling Baby Bell. What does it get for its full-price buck? Among other things, it gets the chance to offer telephone service by cable, giving rise to the speculation that even the RBOCs have conceded that cable is the superior platform for information services. Not an easy concession to make after you have already sunk billions in installed telephone plant.

US. West invests $2.5 billion in Time-Warner. Another RBOC opens the register and hands over the cash to its putative archrival, the nation's second largest cable operator. What does it get in return? A minority interest without management control. If you were looking for a shootout at the O.K. Corral between telcos and cable, this deal suggests you may be disappointed. Telephone managers have been raised, after all, to believe that competition is unpleasant and avoidable.

The New York Times buys the Boston Globe for $1.1 billion. As the

deadline for placing bets arrives, the Times draws on its deep experience in information collection, retrieval, and distribution--and bets on a tired regional newspaper.

MCI sells a 20 per cent interest to British Telecom for $4.3 billion. In what MCI's CEO modestly labels the "deal of the century," the nation's second largest long-distance carrier-that is to say, one of the companies that, along with AT&T and Sprint, have already built the data highway--puts billions in its war chest, aligns itself with one of the giant international players, and retains control of its own destiny.

Where, then, lies the value? Some see value in the "switch," which permits the telephone companies simultaneously to arrange millions of one-to-one connections. Others see value in the "broadband" capability of cable to move large digital payloads down coaxial pipelines. Others place a premium on the software and listen expectantly for the big feet of Microsoft. Or is it chips that will add the value (Intel) or consumer-friendly gizmos (Apple) or plain old intellectual property (Disney)? Why, in a moment of such confusion, would risk-averse corporate managers be placing such heavy bets? Because it is one of those rare moments in techno-economic history when it becomes dear that some players will win big and many other players will win at least a little. The zero-sum, scarce-spectrum game is over, and real growth is at hand. Here's what the digital era may portend for the political economy.

1. The increased power of special interests. Dozens of groups, gangs, flocks, tribes, and posses have already formed their own networks, bringing punch and contemporaneity to their political operations. Consider the following networks launched this past June at the National Cable Television Association convention in San Francisco: The Caribbean Satellite Network; The Crime Channel; The Gaming Network (for parimutuel betting on dogs and horses); The Golf Channel; and The World African Network. And that's just a sample.

2. The retreat of telecommunications regulation. Current regulation is based, politically and economically, on the scarcity of the electromagnetic spectrum. Until recently, if A the broadcaster or B the cop or C the cellular phone operator was using part of the spectrum, other users were crowded out. The government thus got into the allocation business, assigning pieces of the spectrum to various user groups. In the digital era, when you can fire the Encyclopaedia Britannica down a continental pipe faster than you can carry Volume I across your living room, there is less allocation business to do. Alas, a Clinton-Gore FCC seems less likely to put itself out of this business than the Reagan-Bush commissions.

3. The loss of America's cultural hegemony. If you consider the global market to be the sum of cultural products consumed outside the producer's home market, U.S. dominance is astonishing. In music, films, and television, the rest of the world combined cannot challenge us. Through the Eighties, we have enjoyed what looks very much like a monopoly (and to Third World governments exactly like imperialism). In a digital era others will get into the game more easily. While the U.S. will enjoy a strong and possibly pre-eminent position in the popular culture, our relative strength will erode.

4. The rise of the multinational organization. If the flow of people, ideas, and money is no longer inhibited by the passage of time or the expanse of distance or the narrowmindedness of nationalism, current national and religious identities cannot help being affected. Is it fanciful to foresee a day when young people around the world come to think

of themselves as hailing from MTV rather than from the U.S.A. or the CIS or the EC? Perhaps-but one already sees business people untethering themselves from national moorings and slipping easily around the world with the economic tides. Where "supranationals" like Rupert Murdoch and James Goldsmith used to be exotic creatures, it is now the exceptional company that does not move its promising young executives systematically around the international markets.

5. The emergence of the digital press lord. During the period that began with broadcast television, now drawing to a dose, there were no commanding, idea-driven personalities. William Paley, the principal figure in network television, concentrated his considerable energies on stacking CBS sitcoms across weekday evenings. Allen Neuharth, the most conspicuous newspaper baron of the period, managed to pass whole years without breaking stories that rippled beyond his Gannett markets. But that's not the way things were in the previous era, the print era, when the Pulitzers and Hearsts and Loebs used their media outlets to project idiosyncratic worldviews. It seems possible that we will soon see their like again, as digital press lords look to the horizon for expansion.

In Europe, Germany's Bertelsmann empire and Silvio Berlusconi of Italy are racing to the future, positioning themselves to compete for international franchises of several kinds. Sony, which combines consumer electronics with a growing entertainment software base, will probably be a player and would surely be so if founder Akio Morita were twenty years younger. The same can be said for Time-Warner, which has struck a less imperial posture since Warner's Steve Ross was replaced by Time Inc. alumnus Gerald Levin. (Entrepreneurial bursts seem to depend more on single-minded individuals than organizational strength.)

There are others testing the waters, including Brazil's Globo (though the Portuguese language barrier is formidable) and Mexico's Televisa. Ted Turner might get a second wind--and a permission slip from his board. As a dark horse, add Wayne Huizenga of Blockbuster Entertainment. And then there are three corporate Americans who must deal with each other before they can hope to win the world. Robert Allen of AT&T, Bert Roberts of MCI (uniquely, he is a second-generation contender, following in the large footsteps of founder William McGowan), and John Malone of TCI, who sits in the enviable position of controlling the largest cable system operator in the world's largest cable market. And of course there may be a guy out there whom nobody has heard of, a Bill Gates-like nerd, who is about to marry the switch with the broadband and make the whole package as consumer-comfy as a microwave oven.

But the odds-on favorite to be the first digital press lord is Rupert Murdoch. With his acquisition of Hong Kong-based Star TV, he can now do what press lords have been able to do only in their daydreams--he can put his video message directly into your home or office wherever you are, from Los Angeles to New York, from London to Vienna, from New Delhi to Tokyo. On Rupert Murdoch's digital empire, the sun never sets.

What will these press lords mean for the rest of us? In my view, a billion Chinese can't be wrong. They expect Murdoch to deliver timely, more-or-less accurate news and lots of attractively packaged entertainment. That prospect excites the information-starved Chinese masses while simultaneously chilling their political masters in Peking. On all sides there is agreement that information is power and that information widely distributed is power dispersed and restrained. The rise of the press lords paradoxically signals the revitalization of democratic movements.

Indeed, the collapse of Communism was significantly assisted by two aspeas of the telecommunications revolution. The dissidents employed faxes, computers, and photo-copying machines to undermine the system. And Gorbachev launched the perestroika that eventually destroyed his regime precisely because a closed society was bound to fall further and further behind in an information age.

The digital revolution is, in net effect, a liberation movement. It's democratic capitalism with a Schumpeterian vengeance, a meritocratic global village in which roots, precedent, and custom will count for little. Those who prosper in the information economy will be those with talent, energy, and--perhaps most of all--speed. For, while it may not always have seemed so, it's clear now that our trip through the twentieth century has been life in the slow lane.

Mr. Freeman, a Peabody Award-winning television producer, is chairman of the Blackwell Corporation.

Descriptors: Information industry--Innovations; Telecommunication--Innovations; Telephone companies--Acquisitions, mergers, divestments; Cable television broadcasting industry--Acquisitions, mergers,
Product/Industry Names: 7375 Information retrieval services; 4813 Telephone communications, exc. radio; 4841 Cable and other pay TV services
File Segment: MI File 47
...US. West invests $2.5 billion in Time-Warner. Another RBOC opens the register and hands over the cash to its putative archrival, the nation's second largest cable operator. What...

...cent interest to British Telecom for $4.3 billion. In what MCI's CEO modestly labels the "deal of the century," the nation's second largest long-distance carrier -that is to say, one of the companies that, along with AT&T and Sprint...

...a little. The zero-sum, scarce-spectrum game is over, and real growth is at hand . Here's what the digital era may portend for the political economy.

1. The increased...

8/K/11 (Item 4 from file: 148)
DIALOG(R)File 148: Gale Group Trade & Industry DB

04571835 Supplier Number: 08904585 (THIS IS THE FULL TEXT)
Small shipments reach further with technology.

Richardson, Helen L.
Transportation & Distribution , v31 , n4 , p14(4)
April , 1990
ISSN: 0895-8548
Language: ENGLISH
Record Type: FULLTEXT
Word Count: 2728 Line Count: 00220

Text:
Small shipments shippers are using leading-edge technology to optimize routing and mode selection, consolidate shipments, and improve

communications.
The past three years have seen minimum charges for less-than truckload (LTL) shipments on certain commodities shoot up 20% while LTL rates have gone up only 2%, reports Tom Harshman, corporate transportation manager, rates and analysis, Baxter Healthcare.

Baxter Healthcare is representative of a. growing number of small shipment shippers who recognize that service providers can be partners rather than adversaries and that in many cases, technology can improve efficiency and optimize decision making to keep costs in line or even reduce them.

Things started to change at Baxter Healthcare when carriers specializing in small shipments saw opportunity knocking and moved into the low end of LTL with new services and rate structures. United Parcel Service (UPS) introduced Hundredweight Service, allowing shippers to save as much as 50% over standard rates if they ship multiple packages to a single consignee, up to 70 lbs per parcel, limited to 130 in. length and girth combined, total weight over 200 lbs, shipped the same day, via ground. Roadway Package Service (RPS) followed with a similar service.

Like many shippers, the problem for Baxter's Harshman was knowing when to use LTL and when to use multi-weight or single parcel service. Baxter's transportation costs-$47 million for commercial transportation in 1989-and heavy volume meant Harshman needed to improve his shopping ability. A hefty 41% of his transportation budget was spent on shipments of less than 250 lbs. Increasing customer demand for more frequent shipments will continue to shrink shipment size.

Harshman devised a set of specifications to rate shop between LTL minimum charge carriers and weight-based parcel carriers such as UPS. He found no commercial system to meet his specifications but he did find a software company willing to develop a system that could optimize shipping method by looking at a number of internal variables as well as the LTL minimum charge versus weight-based rate and the new multi-weight options.

With the routing and rating system expected to be active in 40 shipping regions by the end of this year, Harshman expects a payback of $1 to $1.5 million annually, from the system and from using UPS Hundredweight.

Because of the size of the company, Harshman says he could force LTL carriers to quote artificially low minimum rates for certain divisions. He avoids that practice because he knows the carrier would have to make up the loss, probably in another Baxter division or on the service level. Instead, Harshman chose a win/win approach. Ship systematically

Volume can be a significant factor even when shipment size is small. "TanData's Parcel Manifest System(TM) allows us to save over a million dollars a year," says Robert K. Earley, vice president-distribution, Williams-Sonoma. "At our Memphis distribution center, we produce nearly 1,200 completed packages an hour," he adds. "We use the system to manifest a total of 99 drop-ship zones in a zoneskipping' arrangement with our carrier. "

But you don't have to be Federal Express' largest shipper or even a major customer of UPS to benefit. Shipping systems can be beneficial to large or small companies through:

* Productivity improvements-it takes two to three minutes to hand log a parcel versus seconds for the shipping system.

* Speed and accuracy-the system weighs the parcel, selects the best method (does rate shopping for you), checks the zip code for zone information, determines and records the shipping charges, assigns shipper

number, and prints a manifest to give to the driver.

* Fast turn around-all information is available for instant, correct billing. Billing different departments is automatic. Daily management reports keep everyone up to date. And billing goes out the door the same day the product does.

The cost of shipping systems has come down dramatically in the last five years, says Tom Shimko, manager, product marketing for scale-based shipping systems for Pitney Bowes. The functionality of a system that used to cost $10,000 is now available for one-third less. In fact, Shimko points out that Pitney Bowes offers a system today for $4,200 that provides more functionality than the $10,000 system of five years ago. One benefit of shipping systems is in helping shippers take advantage in the potential savings in consolidating small shipments.

Choose the best method

Cleveland Consulting Associates (CCA) has helped clients reduce freight bills by 5% to 22% with shipment management systems aimed at improving planning, costing, and allocation of transportation resources. By automating the tasks that formerly consumed hours of planners' time, they free up management to concentrate on more strategic issues.

The first step is to look at what the company is trying to do: improve service, drive down costs, or penetrate a new market. What is the best way to accomplish those goals?

To effect parcel consolidation, says Gary Cross, vice president, transportation at CCA, you need to look for distribution opportunities, analyze logistics flow (inbound or outbound), gather information on demand (How volatile is it?), and identify distribution patterns. You also need to know what your consolidation options are, says Cross. Those options might include:

* Consolidation of LTL to pool point or UPS drop point.

* Consolidate shipments to build truck load (TL) shipments with stop-offs.

* Stop-off delivery combined with drop-offs to a pool point.

A computer software system used by CCA builds loads and structures routes from current orders. The system evaluates customer orders, service requirements, and varying transportation rates to achieve least-cost freight consolidation, mode selection, and routing.

While humans can do the same thing, the computer's strength is in analyzing tons of complex data so the human has better information for decision-making. The key role for humans is deciding when to break the rules to meet the service needs of customers. Put another way, computers can take over the drudge work, allowing humans to spend their time and talents on customer service, says Cross.

National Starch and Chemical has an inhouse, point-of-origin freight consolidation program making big shipments out of little shipments. For example, a computer operator in Chicago accesses information on all shipments coming out of that region. He makes larger LTL shipments for lower rates, sometimes building TL shipments with stop-offs.

The consolidation program saves National Starch and Chemical over $1 million per year on freight charges of around $62.5 million. However, Stanley Filipiak, director of transportation, still faces a selling job with the sales department. "We look at shipments to reduce cost per hundredweight," he says, "while salespeople tend to want everything delivered the next day.

National Starch and Chemical's consolidation program is based on the order entry system. " The same could be done with good hard work, " claims

Filipiak. In fact, they did much the same thing before they were computerized, using clear communication between departments. " No matter what kind of computer system you have, he claims, " you need interpersonal relationships. " The same can be said for relationships between shippers and carriers. Carrier selection

" For too long [shippers and carriers] have perceived each other as adversaries,', says Bill Whitener, vice president customer relations with Overnight Transportation. That will no longer work. We have to create and maintain an atmosphere of trust. Then you can establish a partnership relationship. "

Quality of service is one of the keys to carrier selection, says Dennis Baird, manager of transportation services at F.W. Woolworth Corp. Quality of service is not as crucial as in a just-in-time operation, he says, but the quality level must be reasonable.

Greg Johannes, traffic manager at Gibson Greetings, agrees. Carriers are selected on the basis of speed and price but not price at the expense of service. A high level of service is necessary for the company to retain market share. Johannes negotiates a good rate but also recognizes the LTL industry has to survive.

Service is a priority at johnson & johnson Healthcare Services (JJHS) also, followed by pricing advantage. JJHS gives a carrier a fair price to support services and provide a profit. But in return, says George Yochum, transportation operations manager, the carrier ought to know the customer's customer (their receiving practices) and not make accessorial charges. Carriers should know, for instance, if there's inside delivery and that should be part of the rate structure.

Clem Baumeister, traffic manager for retailer Things Remembered, switched his business from UPS to RPS when RPS offered an attractive discount. On the short haul, claims Baumeister, the two carriers are equal. Even though UPS now offers a comparable discount, Baumeister did not switch 100% of his business back to UPS because RPS offers Collect Service (bill the consignee)-a service that meets the special needs of Things Remembered.

What are shippers looking for? Ongoing tracking of customer satisfaction at Federal Express (FedEx) reveals customers want speed, reliability, and convenience, says Dick Metzler, U.S. marketing, FedEx.

On the other hand, carriers stress speed while shippers look for consistency, says Filipiak. The shipper sends hundreds of LTL shipments daily. Except for an occasional emergency, speed is not an issue for all of them.

Filipiak supplies all company locations with a preferred carrier list. He establishes standards for transit time by asking a carrier how long it takes to get from point A to point B. Once that standard is established, he likes to see that transit time met consistently. Carriers make it easy

In addition to consistency, shippers are looking for ease of use. And service providers, vying for a slice of the $15-billion small shipments market, are using different techniques to provide that ease, competing on price, or identifying a niche to serve.

* FedEx is using technology to make their service more convenient for customers, says Peter Yin, customer automation marketing. In addition to a guaranteed clearance window, the carrier allows companies with a push-button phone to call and book pickup through an automated voice response system.

High-volume shippers-at least ten packages per day-use FedEx's

shipping management system, Powership II. The system allows customers to use their own shipping label and attach a bar code. To register the package with Powership II, the shipper enters shipping information and scans the bar code. Powership II produces itemized invoices daily, along with a management report. The information is shipper generated, eliminating the need to reconcile with internal records. And the shipper simply enters the bar code to track the parcel.

High-volume shippers-100 plus packages daily with FedEx-can use Powership Plus on their in-house computer system. The system can be tied to a management information system so information entered once is available for inventory, printing labels or bar codes, billing, and more.

* RPS is another carrier cutting the paperwork associated with small shipments. The shipper is looking for one thing, says Bram johnson, vice president, marketing, and that is service. RPS requires the shipper to put a carrier-supplied bar code on each parcel. That label becomes both a postage stamp and a license plate to smooth the ride through the distribution system.

Even RPS' multi-weight program is simplified. Because RPS accumulates records electronically, the customer doesn't have to presort the shipment. Parcels eligible for the multi--weight rate are logged and rated automatically along with single parcels.

* While customers use Roberts Express' exclusive-use, time-definite service occasionally to meet extraordinary demand, according to Joel Childs, marketing manager, in some cases it's also a low-cost alternative to LTL.

One example where Roberts Express might be competitive is carriage of high-cost items with multiple stop-offs. Other factors contribute to Roberts Express' competitive position with LTL-there's no need for crating since there's nothing else on the truck, Roberts matches vehicle to load size rather than using standard 20- to 48-ft trailers, the carrier averages only one freight claim per 2,500 shipments.

* To be credible in the expedited service field, we have to know where the shipment is, says Roger Sherman, Tri-State Expedited's vice president and general manager. Tri-State uses satellite tracking and cellular phones to track shipments.

* Overnight adds value to its transportation service through shipment analysis. The carrier analyzes every shipment the customer makes over a set period of time, based on service standards established by Overnight. The carrier compares its performance to those standards. " We are not satisfied with being competitive," says Whitener. " We intend to be the leader."

* Quill Corp. ships approximately 16,000 small packages daily. With UPS Hundredweight Service, the company saves about 20% on shipments in the 250-lb to 500-lb range, according to Terry Schwarting, transportation manager. The UPS service includes inside delivery at no extra charge. Quill also saves on staging costs. Since UPS treats each parcel as an individual shipment, parcels going to the same location don't need to be unitized as in LTL shipments.

UPS' On Call Air Pickup, same day pickup service of express air packages sent via UPS, is available in a number of major cities. Look for the service to spread to others in the near future. Service goes global

UPS and other carriers also are spreading services beyond U.S. borders.

* Roberts Express is starting service in Europe. On this continent, the carrier already has operating authority in Quebec and Ontario and is expanding into other Canadian provinces.

* Internationally, FedEx is planning to increase the number of countries served. Through the former Flying Tigers network, FedEx's International Distribution Service (IDS) offers time-definite delivery from foreign markets to destinations in the U.S. FedEx plans to expand IDS in the U.S. to include outbound shipments to foreign markets later this year.

* UPS has delivery networks in 180 countries. UPS's International Shipments Processing System (ISPS) speeds customs clearance by providing shipping information to customs agents in advance.

UPS has an electronic data link to the Canadian Customs Service. The carrier transmits to a Customs mainframe and the Customs mainframe tells the carrier whether the paperwork has been approved or rejected. The carrier is looking for connections to brokerage processing facilities in other countries. The electronic links will be invisible to shippers, providing faster service with fewer errors.

The past decade has seen rapid changes in transportation and distribution. No one doubts change will continue to be the norm. Shippers and service providers are constantly looking for ways to adapt to or benefit from those changes.

Carriers are broadening the types of services they offer, says Lisa Saunders, chairman of the executive committee of the National Small Shippers Traffic Council and director of physical distribution at C.B. Fleet. Long-haul LTL carriers are getting into regional hauling-CF has Conway, Roadway is buying regional carriers, Yellow Freight is soliciting both long haul and regional haul through the same system.

Carriers will continue to go out of business, Saunders predicts, prolonging the undercharge problem and causing continued equipment shortages, thus driving prices up. The certified driver requirement will have the same effect by shrinking the qualified driver pool.

Overnight's Whitener hears customers saying they need consistency; prompt, courteous, and action-filled responses; competitive pricing-but not to the point of adversely affecting the carrier's attitude toward service. " The message I get is that we need to put substance into our commitments toward total partnership, says Whitener. " None of us have all the answers." That being the case, everyone needs to work together to find optimal solutions to mutual problems. T&D

Special Features: illustration; photograph
Industry Codes/Names: TRAN Transportation, Distribution and Purchasing
Descriptors: Trucking--Services; Shipment of goods--Innovations
Product/Industry Names: 4210 Trucking & Courier Services, Ex. Air
File Segment: TI File 148

...to large or small companies through:

* Productivity improvements-it takes two to three minutes to hand log a parcel versus seconds for the shipping system.

* Speed and accuracy-the system weighs...want speed, reliability, and convenience, says Dick Metzler, U.S. marketing, FedEx.

On the other hand , carriers stress speed while shippers look for consistency, says Filipiak. The shipper sends hundreds of...

...tied to a management information system so information entered once is available for inventory, printing labels or bar codes, billing, and more.

* RPS is another carrier cutting the paperwork associated with small shipments. The shipper is looking for one thing, says...

```
? set hi on

HILIGHT set on as ''  ''

? t s8/medium,k/all

Dialog eLink:
8/K/1 (Item 1 from file: 15)
DIALOG(R)File 15: ABI/Inform(R)
(c) 2010 ProQuest Info&Learning. All rights reserved.

01759773             04-10764
Pfizer's prescription for fulfillment

Thomas, Jim
Logistics Management & Distribution Report   v38n1  pp: 40-43
Jan 1999
ISSN: 1098-7355  Journal Code: LMDR
Word Count: 1445
Text: ...Normally, you would not take any of these steps until you had the
product in hand," notes Phil Rose, logistics center manager.

Once the distribution group received the Viagra, it packaged...

...000 lines to three million. Without our distribution infrastructure, I
doubt that we could have handled such an increase in business. If we
couldn't handle the increases while improving the level of service,
we wouldn't have been doing our...goal is to maxi- mize throughput,
products pass over weigh-in-motion scales. Pfizer traditionally
affixed two labels to literature shipments-one label
with shipper information and another with carrier
information. Pfizer streamlined the literature-- fulfillment process by
combining its label information with United Parcel...

...best in handling order fulfillment, because we know that will make us
flexible enough to handle the needs of the marketplace. Without
these improvements, customer service could not be one of...



8/K/2 (Item 1 from file: 9)
DIALOG(R)File 9: Business & Industry(R)
(c) 2010 Gale/Cengage. All rights reserved.

02043661  Supplier Number: 25517299 (USE FORMAT 7 OR 9 FOR FULLTEXT)
WMS, bar codes, RFDC launch Borders.com
( Borders Group Inc has more than 240 retail stores and processes orders for these
stores and for Borders.com by using a warehouse management system in its warehouse of
almost 200,000 sq ft )

ADC News & Solutions , v 54 , n 14 , p 12
December 1999
```

Document Type: Journal (United States)
Language: English Record Type: Fulltext
Word Count: 883 (USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:
...addition to filling all E-commerce orders for books, videos, and music CDs, the facility handles special orders for the company's 240 plus retail outlets. Six other warehouses handle bulk shipments to the stores.

The most basic information link between Borders.com, the warehouse...

...communicates with workers at the stations by either RF terminal or fixed terminal.
One station handles all Internet singles. Each tote and the item in it are scanned, initiating printout of...

...department. A manifest system determines which carrier will ship it, and prints the address and carrier labels required.

Another station handles all Internet multiples. When the tote and its items are scanned, items are assigned a...

...location. From this point forward, the multiple is processed like the single.

The third station handles store orders. They are processed much the same as Internet multiples. The only difference is...

8/K/3 (Item 2 from file: 9)
DIALOG(R)File 9: Business & Industry(R)

02040684 Supplier Number: 25520438 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Rebuilding the Monopoly
(WorldCom is buying Sprint for $129 bil or more; Sprint PCS gives WorldCom a wireless carrier with a nationwide footprint)

America's Network Telecom Investor Supplement , p 16+
December 01, 1999
Document Type: Journal; Company Overview ISSN: 1075-5292 (United States)
Language: English Record Type: Fulltext
Word Count: 3730 (USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:
...participating in a particular market. In evaluating a horizontal merger where, say, the nation's second leading long distance carrier proposes to buy out the third -- the DoJ labels markets with a post-merger HHI in excess of 1800 as "highly concentrated."

The guidelines...

...market for integrated digital network services, including high-speed
Internet access.

WorldCom, on the other hand, remains focused on large business
customers which account for two-thirds of the company's...

8/K/4 (Item 3 from file: 9)
DIALOG(R)File 9: Business & Industry(R)

00779724 Supplier Number: 23324707 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Hot Summers, Sizzling Room Air
(Amana is introducing electronic controls, program to eliminate short cycles & more precise temperatures in its Quiet Zone air conditioner line)

HFN , v 69 , n 42 , p 97
October 16, 1995
Document Type: Journal ISSN: 1082-0310 (United States)
Language: English Record Type: Fulltext
Word Count: 1362 (USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:
...remains intact, but two additional brands are being offered for targeted
markets. Freyven, described as Carrier's second label
in Mexico, is moving north with an abbreviated line primarily for Hispanic
communities. Bryant is...

...A molded cabinet will appear first on a 5,000-BTU model with a carrying
handle. Other features include oscillating air sweep and improved
efficiency to 9.7 EER.

Most of...

8/K/5 (Item 1 from file: 275)
DIALOG(R)File 275: Gale Group Computer DB(TM)

01176134 Supplier Number: 00666773 (Use Format 7 Or 9 For FULL TEXT)
Mail-order houses: volume discounts, convenience and flexible terms are helping woo once-hesitant corporate buyers.

Greitzer, John
PC Week , v3 , n13 , pS-11-S-13
April 1 , 1986
Document Type: buyers guide
ISSN: 0740-1604
Language: ENGLISH Record Type: FULLTEXT; ABSTRACT
Word Count: 2556 Line Count: 00193 ...I've been watching IBM for years and years. The first computer I got may
hands on was an IBM 705 back in 1959. I want to provide that same
kind...United Parcel Service (UPS). They'll also send an order overnight

using the UPS "red label" service, Federal Express, or another overnight carrier; however, in almost all cases, the customer has to pay for overnight delivery.
"In a...

...the pace of sales and high rate of technological change was more than they could handle, industry sources said.
Mainstreet's Michsky said he thinks the new generation of mail-order ...

...because the PC business moved so fast, they grew so quickly that they couldn't handle it. The current companies, at least the big ones, are better financed today. They're...

8/K/6 (Item 1 from file: 16)
DIALOG(R)File 16: Gale Group PROMT(R)

06423445 Supplier Number: 54938064 (USE FORMAT 7 FOR FULLTEXT)

Working the Minute Mine.
Muraskin, Ellen
Computer Telephony , v 7 , n 6 , p 76
June , 1999
Language: English Record Type: Fulltext
Document Type: Magazine/Journal ; Trade
Word Count: 6161
- ...to the telco supplying complicated products (e.g., VPNs) to multinational corporations. On the other hand, they cost less.
They also generally don't come with sophisticated data-mining algorithms and...market packages, for CLEC, LD, Wireless and IP and DSL services. "Lock-box" payment processing handles debits and credits to and from financial institutions. Open APIs allow BillPlex to bolt onto ...on) new customer fields. This release also adds a CRM module -- Customer Management Journal -- that handles registration, sales, and follow-up task assignment, color-coded to specific agents. It also documents...may pay more slowly or fitfully than those who see smaller bills in separate envelopes. Sticker shock may severely impact carrier cash flow. The second is customer service: If customers expect to resolve issues stemming from five different services via one 800 number appearing on their bill, CSRs must be equipped to handle all those different kinds of complaints and requests. They must have all-inclusive views of...

8/K/7 (Item 1 from file: 634)
DIALOG(R)File 634: San Jose Mercury

11760065

EAST P.A. MAN'S BODY FOUND IN ROME, HEADED TO MEXICO

San Jose Mercury News (SJ) - Tuesday, September 17, 2002
By: TRUONG PHUOC KHANH AND THAAI WALKER, Mercury News
Edition: Morning Final Section: Front Page: 1A
Word Count: 1,031
- ...was discovered in Rome.

''There was a mix-up in the warehouse based on incorrect labeling by another carrier,'' Jeff Awalt, spokesman for Continental said. ''We've been working with everyone involved since we...

...caskets and freight for a few hours before being placed on a plane.

Continental Airlines handles cargo warehouse operations for Delta at San Francisco Airport.

Neither airline publicly accepted blame, although...

...paperwork, Flanagan said, can either be attached to the shipping container by the mortuary or handed to an airline clerk.

''It's not an unduly complicated process,'' Flanagan said. ''It's...

8/K/8 (Item 1 from file: 148)
DIALOG(R)File 148: Gale Group Trade & Industry DB

09149958   Supplier Number: 18916150 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Extreme overbalance stimulations using TCP proppant carriers. (tubing-conveyed perforating system)

Snider, P.M.; Oriold, F.D.
World Oil , v217 , n11 , p41(6)
Nov , 1996
ISSN: 0043-8790
Language: English
Record Type: Fulltext; Abstract
Word Count: 4975   Line Count: 00415
...is executed as designed). At least two Canadian wells have been stimulated in which radioactively tagged proppant was contained in the carrier, and subsequent logs observed the radioactivity in the formation. On jobs where proppant carriers are retrieved from...and Samson Canada are recognized for providing comparative well information and encouragement.

LITERATURE CITED

1 Handren, P. J., T. B. Jupp and J. M. Dees, "Overbalance perforating and stimulation method for wells," paper SPE 26515.

2 Dees, J. M., and P. J. Handten, "New method of overbalance perforating and surging of resin for sand control," paper SPE 26545...

8/K/9 (Item 2 from file: 148)
DIALOG(R)File 148: Gale Group Trade & Industry DB

08245456 Supplier Number: 17623879 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Hot summers, sizzling room air.(1996 room air conditioners)(Industry Overview)

HFN The Weekly Newspaper for the Home Furnishing Network , v69 , n42 , p97(1)
Oct 16 , 1995
Document Type: Industry Overview
Language: English
Record Type: Fulltext; Abstract
Word Count: 1507 Line Count: 00122
...remains intact, but two additional brands are being offered for targeted markets. Freyven, described as Carrier's second label in Mexico, is moving north with an abbreviated line primarily for Hispanic communities. Bryant is...

...A molded cabinet will appear first on a 5,000-BTU model with a carrying handle. Other features include oscillating sweep and improved efficiency to 9.7 EER.
Most of the...

8/K/10 (Item 3 from file: 148)
DIALOG(R)File 148: Gale Group Trade & Industry DB

06798618 Supplier Number: 14667466 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Populism + telecommunications = global democracy. (how mergers between telephone companies and the cable television industry are changing the future of international communication and information services) (Cover Story)

Freeman, Neal B.
National Review , v45 , n22 , p50(2)
Nov 15 , 1993
Document Type: Cover Story
ISSN: 0028-0038
Language: ENGLISH
Record Type: FULLTEXT; ABSTRACT
Word Count: 1781 Line Count: 00139
...US. West invests $2.5 billion in Time-Warner. Another RBOC opens the register and hands over the cash to its putative archrival, the nation's second largest cable operator. What...
...cent interest to British Telecom for $4.3 billion. In what MCI's CEO modestly labels the "deal of the century," the nation's second largest long-distance carrier-that is to say, one of the companies that, along with AT&T and Sprint...

...a little. The zero-sum, scarce-spectrum game is over, and real growth is at hand. Here's what the digital era may portend for the political economy.
1. The increased...

8/K/11 (Item 4 from file: 148)
DIALOG(R)File 148: Gale Group Trade & Industry DB

```
04571835     Supplier Number: 08904585 (USE FORMAT 7 OR 9 FOR FULL TEXT )
Small shipments reach further with technology.

Richardson, Helen L.
Transportation & Distribution , v31 , n4 , p14(4)
April , 1990
ISSN: 0895-8548
Language: ENGLISH
Record Type: FULLTEXT
Word Count: 2728    Line Count: 00220
...to large or small companies through:
      * Productivity improvements-it takes two to three minutes to
hand log a parcel versus seconds for the shipping system.
      * Speed and accuracy-the system weighs...want speed, reliability, and
convenience, says Dick Metzler, U.S. marketing, FedEx.
      On the other hand, carriers stress speed while shippers look
for consistency, says Filipiak. The shipper sends hundreds of...
...tied to a management information system so information entered once is
available for inventory, printing labels or bar codes, billing, and
more.
      * RPS is another carrier cutting the paperwork
associated with small shipments. The shipper is looking for one thing, says
...


? s s3 and ups

              73  S3
         1181605  UPS
      S9       5  S3 AND UPS

? s s9 not py>=2004

Processing
Processing
Processing
Processing
Processing
Processing
Processing
Processing
Processing
Processed  10 of  24 files ...
Completed processing all files
               5  S9
        71128003  PY>=2004
     S10       5  S9 NOT PY>=2004

? rd

     S11       5  RD  (unique items)

? t s11/medium,k/all

Dialog eLink:
```

11/K/1 (Item 1 from file: 15)
DIALOG(R)File 15: ABI/Inform(R)

01601902 02-52891
What's ahead for LTLs in 1998

Anonymous
Logistics Management & Distribution Report v37n1 pp: 60
Jan 1998
Journal Code: LMDR
Word Count: 347
Text: ...hauls will be fair game for any number of carriers. Customers today care less about labels and more about transportation solutions.

The single-carrier concept will get another look. In the recent past, it was cheaper and easier to do business with fewer...

...However, he says, "information systems have removed that barrier" In addition, shippers hurt by the UPS strike are questioning again the business sense of sole sourcing.

Any rate increases should stick...

Dialog eLink:
11/K/2 (Item 2 from file: 15)
DIALOG(R)File 15: ABI/Inform(R)

01601901 02-52890
Another stellar year for LTL?

Thomas, Jim
Logistics Management & Distribution Report v37n1 pp: 59-61
Jan 1998
Journal Code: LMDR
Word Count: 1520
Text: ...officer of Yellow Corp.

Myers further notes that LTLs are not billion-dollar operations, like UPS, which the Teamsters struck last summer. "The Teamsters can't accuse us of corporate greed...

...be immune from the economy, but they will be a little more insulated from shortterm ups and downs. "[W]e won't live or die in a good year or bad...hauls will be fair game for any number of carriers. Customers today care less about labels and more about transportation solutions. The single-carrier concept will get another look. In the recent past, it was cheaper and easier to do business with fewer...

...However, he says, "information systems have removed that barrier" In

addition, shippers hurt by the UPS strike are questioning again the
business sense of sole sourcing.

Any rate increases should stick...

11/K/3 (Item 1 from file: 275)
DIALOG(R)File 275: Gale Group Computer DB(TM)

01176134 Supplier Number: 00666773 (Use Format 7 Or 9 For FULL TEXT)
Mail-order houses: volume discounts, convenience and flexible terms are helping woo once-
hesitant corporate buyers.

Greitzer, John
PC Week , v3 , n13 , pS-11-S-13
April 1 , 1986
Document Type: buyers guide
ISSN: 0740-1604
Language: ENGLISH Record Type: FULLTEXT; ABSTRACT
Word Count: 2556 Line Count: 00193 ...parts by "second-day air" via the socalled blue
label service of United
Parcel Service (UPS). They'll also send an order overnight using the
UPS "red label" service, Federal Express, or another
overnight carrier; however, in almost all cases, the customer has to
pay for overnight delivery.
"In a...

11/K/4 (Item 1 from file: 148)
DIALOG(R)File 148: Gale Group Trade & Industry DB

0019978673 Supplier Number: 133281246 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Court hears arguments from telecom giant, start-up.

Daily Record (Baltimore, MD) , NA
June 1 , 2001
Language: English
Record Type: Fulltext
Word Count: 656 Line Count: 00055
...an interview from the companys Baltimore headquarters. Its more
than a bunch of screw-ups. Its intentional bad acts. And then they
try to go in (to state-level public...

...service through Ntegrity will be terminated and advising them to
immediately transfer their business to (another) local telephone
carrier. Mendez labeled as total hogwash Ntegritys
allegations that Verizon overstated charges to the startup by as much...

11/K/5 (Item 2 from file: 148)
DIALOG(R)File 148: Gale Group Trade & Industry DB

04571835 Supplier Number: 08904585 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Small shipments reach further with technology.

Richardson, Helen L.
Transportation & Distribution , v31 , n4 , p14(4)
April , 1990
ISSN: 0895-8548
Language: ENGLISH
Record Type: FULLTEXT
Word Count: 2728 Line Count: 00220
...into the low end of LTL with new services and rate structures. United Parcel Service (UPS) introduced Hundredweight Service, allowing shippers to save as much as 50% over standard rates if...

...to rate shop between LTL minimum charge carriers and weight-based parcel carriers such as UPS. He found no commercial system to meet his specifications but he did find a software...
...a payback of $1 to $1.5 million annually, from the system and from using UPS Hundredweight.

Because of the size of the company, Harshman says he could force LTL carriers...

...don't have to be Federal Express' largest shipper or even a major customer of UPS to benefit. Shipping systems can be beneficial to large or small companies through:

* Productivity improvements...

...options are, says Cross. Those options might include:

* Consolidation of LTL to pool point or UPS drop point.
* Consolidate shipments to build truck load (TL) shipments with stop-offs.
* Stop-off...the rate structure.

Clem Baumeister, traffic manager for retailer Things Remembered, switched his business from UPS to RPS when RPS offered an attractive discount. On the short haul, claims Baumeister, the two carriers are equal. Even though UPS now offers a comparable discount, Baumeister did not switch 100% of his business back to UPS because RPS offers Collect Service (bill the consignee)-a service that meets the special needs...

...tied to a management information system so information entered once is available for inventory, printing labels or bar codes, billing, and more.

* RPS is another carrier cutting the paperwork associated with small shipments. The shipper is looking for one thing, says ...intend to be the leader."
* Quill Corp. ships approximately 16,000 small packages daily. With UPS Hundredweight Service, the company saves about 20% on shipments in the 250-lb to 500-lb range, according to Terry Schwarting, transportation manager. The UPS service includes inside delivery at no extra charge. Quill also saves on staging costs. Since UPS treats each parcel as an individual shipment, parcels going to the same location don't need to be unitized as in LTL shipments.

UPS' On Call Air Pickup, same day pickup service of express air packages sent via UPS, is available in a number of major cities. Look for the service to spread to others in the near future. Service goes global

UPS and other carriers also are spreading services beyond U.S. borders.

* Roberts Express is starting...

...IDS in the U.S. to include outbound shipments to foreign markets later this year.

* UPS has delivery networks in 180 countries. UPS's International Shipments Processing System (ISPS) speeds customs clearance by providing shipping information to customs agents in advance.

UPS has an electronic data link to the Canadian Customs Service. The carrier transmits to a...

? t s11/full,k/5

11/K/5 (Item 2 from file: 148)
DIALOG(R)File 148: Gale Group Trade & Industry DB

04571835 Supplier Number: 08904585 (THIS IS THE FULL TEXT)
Small shipments reach further with technology.

Richardson, Helen L.
Transportation & Distribution , v31 , n4 , p14(4)
April , 1990
ISSN: 0895-8548
Language: ENGLISH
Record Type: FULLTEXT
Word Count: 2728 Line Count: 00220

Text:
Small shipments shippers are using leading-edge technology to optimize routing and mode selection, consolidate shipments, and improve communications.

The past three years have seen minimum charges for less-than truckload (LTL) shipments on certain commodities shoot up 20% while LTL rates have gone up only 2%, reports Tom Harshman, corporate transportation manager, rates and analysis, Baxter Healthcare.

Baxter Healthcare is representative of a. growing number of small shipment shippers who recognize that service providers can be partners rather than adversaries and that in many cases, technology can improve efficiency and optimize decision making to keep costs in line or even reduce them.

Things started to change at Baxter Healthcare when carriers specializing in small shipments saw opportunity knocking and moved into the low end of LTL with new services and rate structures. United Parcel Service (UPS) introduced Hundredweight Service, allowing shippers to save as much as 50% over standard rates if they ship multiple packages to a single consignee, up to 70 lbs per parcel, limited to 130 in. length and girth combined, total weight over 200 lbs, shipped the same day, via ground. Roadway Package Service (RPS) followed with a similar service.

Like many shippers, the problem for Baxter's Harshman was knowing when to use LTL and when to use multi-weight or single parcel service. Baxter's transportation costs-$47 million for commercial transportation in 1989-and heavy volume meant Harshman needed to improve his shopping ability. A hefty 41% of his transportation budget was spent on shipments of less than 250 lbs. Increasing customer demand for more frequent shipments will continue to shrink shipment size.

Harshman devised a set of specifications to rate shop between LTL minimum charge carriers and weight-based parcel carriers such as UPS . He found no commercial system to meet his specifications but he did find a software company willing to develop a system that could optimize shipping method by looking at a number of internal variables as well as the LTL minimum charge versus weight-based rate and the new multi-weight options.

With the routing and rating system expected to be active in 40 shipping regions by the end of this year, Harshman expects a payback of $1 to $1.5 million annually, from the system and from using UPS Hundredweight.

Because of the size of the company, Harshman says he could force LTL carriers to quote artificially low minimum rates for certain divisions. He avoids that practice because he knows the carrier would have to make up the loss, probably in another Baxter division or on the service level. Instead, Harshman chose a win/win approach. Ship systematically

Volume can be a significant factor even when shipment size is small. "TanData's Parcel Manifest System(TM) allows us to save over a million dollars a year," says Robert K. Earley, vice president-distribution, Williams-Sonoma. "At our Memphis distribution center, we produce nearly 1,200 completed packages an hour," he adds. "We use the system to manifest a total of 99 drop-ship zones in a zoneskipping' arrangement with our carrier. "

But you don't have to be Federal Express' largest shipper or even a major customer of UPS to benefit. Shipping systems can be beneficial to large or small companies through:

* Productivity improvements-it takes two to three minutes to hand log a parcel versus seconds for the shipping system.

* Speed and accuracy-the system weighs the parcel, selects the best method (does rate shopping for you), checks the zip code for zone information, determines and records the shipping charges, assigns shipper number, and prints a manifest to give to the driver.

* Fast turn around-all information is available for instant, correct billing. Billing different departments is automatic. Daily management reports keep everyone up to date. And billing goes out the door the same day the product does.

The cost of shipping systems has come down dramatically in the last five years, says Tom Shimko, manager, product marketing for scale-based shipping systems for Pitney Bowes. The functionality of a system that used to cost $10,000 is now available for one-third less. In fact, Shimko points out that Pitney Bowes offers a system today for $4,200 that provides more functionality than the $10,000 system of five years ago. One benefit of shipping systems is in helping shippers take advantage in the potential savings in consolidating small shipments.

Choose the best method

Cleveland Consulting Associates (CCA) has helped clients reduce freight bills by 5% to 22% with shipment management systems aimed at improving planning, costing, and allocation of transportation resources. By

automating the tasks that formerly consumed hours of planners' time, they free up management to concentrate on more strategic issues.

The first step is to look at what the company is trying to do: improve service, drive down costs, or penetrate a new market. What is the best way to accomplish those goals?

To effect parcel consolidation, says Gary Cross, vice president, transportation at CCA, you need to look for distribution opportunities, analyze logistics flow (inbound or outbound), gather information on demand (How volatile is it?), and identify distribution patterns. You also need to know what your consolidation options are, says Cross. Those options might include:

* Consolidation of LTL to pool point or UPS drop point.

* Consolidate shipments to build truck load (TL) shipments with stop-offs.

* Stop-off delivery combined with drop-offs to a pool point.

A computer software system used by CCA builds loads and structures routes from current orders. The system evaluates customer orders, service requirements, and varying transportation rates to achieve least-cost freight consolidation, mode selection, and routing.

While humans can do the same thing, the computer's strength is in analyzing tons of complex data so the human has better information for decision-making. The key role for humans is deciding when to break the rules to meet the service needs of customers. Put another way, computers can take over the drudge work, allowing humans to spend their time and talents on customer service, says Cross.

National Starch and Chemical has an inhouse, point-of- origin freight consolidation program making big shipments out of little shipments. For example, a computer operator in Chicago accesses information on all shipments coming out of that region. He makes larger LTL shipments for lower rates, sometimes building TL shipments with stop-offs.

The consolidation program saves National Starch and Chemical over $1 million per year on freight charges of around $62.5 million. However, Stanley Filipiak, director of transportation, still faces a selling job with the sales department. "We look at shipments to reduce cost per hundredweight," he says, "while salespeople tend to want everything delivered the next day.

National Starch and Chemical's consolidation program is based on the order entry system. " The same could be done with good hard work, " claims Filipiak. In fact, they did much the same thing before they were computerized, using clear communication between departments. " No matter what kind of computer system you have, he claims, " you need interpersonal relationships. " The same can be said for relationships between shippers and carriers. Carrier selection

" For too long [shippers and carriers] have perceived each other as adversaries,', says Bill Whitener, vice president customer relations with Overnight Transportation. That will no longer work. We have to create and maintain an atmosphere of trust. Then you can establish a partnership relationship. "

Quality of service is one of the keys to carrier selection, says Dennis Baird, manager of transportation services at F.W. Woolworth Corp. Quality of service is not as crucial as in a just-in-time operation, he says, but the quality level must be reasonable.

Greg Johannes, traffic manager at Gibson Greetings, agrees. Carriers are selected on the basis of speed and price but not price at the expense of service. A high level of service is necessary for the company to retain

market share. Johannes negotiates a good rate but also recognizes the LTL industry has to survive.

Service is a priority at johnson & johnson Healthcare Services (JJHS) also, followed by pricing advantage. JJHS gives a carrier a fair price to support services and provide a profit. But in return, says George Yochum, transportation operations manager, the carrier ought to know the customer's customer (their receiving practices) and not make accessorial charges. Carriers should know, for instance, if there's inside delivery and that should be part of the rate structure.

Clem Baumeister, traffic manager for retailer Things Remembered, switched his business from UPS to RPS when RPS offered an attractive discount. On the short haul, claims Baumeister, the two carriers are equal. Even though UPS now offers a comparable discount, Baumeister did not switch 100% of his business back to UPS because RPS offers Collect Service (bill the consignee)-a service that meets the special needs of Things Remembered.

What are shippers looking for? Ongoing tracking of customer satisfaction at Federal Express (FedEx) reveals customers want speed, reliability, and convenience, says Dick Metzler, U.S. marketing, FedEx.

On the other hand, carriers stress speed while shippers look for consistency, says Filipiak. The shipper sends hundreds of LTL shipments daily. Except for an occasional emergency, speed is not an issue for all of them.

Filipiak supplies all company locations with a preferred carrier list. He establishes standards for transit time by asking a carrier how long it takes to get from point A to point B. Once that standard is established, he likes to see that transit time met consistently. Carriers make it easy

In addition to consistency, shippers are looking for ease of use. And service providers, vying for a slice of the $15-billion small shipments market, are using different techniques to provide that ease, competing on price, or identifying a niche to serve.

* FedEx is using technology to make their service more convenient for customers, says Peter Yin, customer automation marketing. In addition to a guaranteed clearance window, the carrier allows companies with a push-button phone to call and book pickup through an automated voice response system.

High-volume shippers-at least ten packages per day-use FedEx's shipping management system, Powership II. The system allows customers to use their own shipping label and attach a bar code. To register the package with Powership II, the shipper enters shipping information and scans the bar code. Powership II produces itemized invoices daily, along with a management report. The information is shipper generated, eliminating the need to reconcile with internal records. And the shipper simply enters the bar code to track the parcel.

High-volume shippers-100 plus packages daily with FedEx-can use Powership Plus on their in-house computer system. The system can be tied to a management information system so information entered once is available for inventory, printing labels or bar codes, billing, and more.

* RPS is another carrier cutting the paperwork associated with small shipments. The shipper is looking for one thing, says Bram johnson, vice president, marketing, and that is service. RPS requires the shipper to put a carrier-supplied bar code on each parcel. That label becomes both a postage stamp and a license plate to smooth the ride through

the distribution system.

Even RPS' multi-weight program is simplified. Because RPS accumulates records electronically, the customer doesn't have to presort the shipment. Parcels eligible for the multi--weight rate are logged and rated automatically along with single parcels.

* While customers use Roberts Express' exclusive-use, time-definite service occasionally to meet extraordinary demand, according to Joel Childs, marketing manager, in some cases it's also a low-cost alternative to LTL.

One example where Roberts Express might be competitive is carriage of high-cost items with multiple stop-offs. Other factors contribute to Roberts Express' competitive position with LTL-there's no need for crating since there's nothing else on the truck, Roberts matches vehicle to load size rather than using standard 20- to 48-ft trailers, the carrier averages only one freight claim per 2,500 shipments.

* To be credible in the expedited service field, we have to know where the shipment is, says Roger Sherman, Tri-State Expedited's vice president and general manager. Tri-State uses satellite tracking and cellular phones to track shipments.

* Overnight adds value to its transportation service through shipment analysis. The carrier analyzes every shipment the customer makes over a set period of time, based on service standards established by Overnight. The carrier compares its performance to those standards. " We are not satisfied with being competitive," says Whitener. " We intend to be the leader."

* Quill Corp. ships approximately 16,000 small packages daily. With UPS Hundredweight Service, the company saves about 20% on shipments in the 250-lb to 500-lb range, according to Terry Schwarting, transportation manager. The UPS service includes inside delivery at no extra charge. Quill also saves on staging costs. Since UPS treats each parcel as an individual shipment, parcels going to the same location don't need to be unitized as in LTL shipments.

UPS' On Call Air Pickup, same day pickup service of express air packages sent via UPS, is available in a number of major cities. Look for the service to spread to others in the near future. Service goes global

UPS and other carriers also are spreading services beyond U.S. borders.

* Roberts Express is starting service in Europe. On this continent, the carrier already has operating authority in Quebec and Ontario and is expanding into other Canadian provinces.

* Internationally, FedEx is planning to increase the number of countries served. Through the former Flying Tigers network, FedEx's International Distribution Service (IDS) offers time-definite delivery from foreign markets to destinations in the U.S. FedEx plans to expand IDS in the U.S. to include outbound shipments to foreign markets later this year.

* UPS has delivery networks in 180 countries. UPS's International Shipments Processing System (ISPS) speeds customs clearance by providing shipping information to customs agents in advance.

UPS has an electronic data link to the Canadian Customs Service. The carrier transmits to a Customs mainframe and the Customs mainframe tells the carrier whether the paperwork has been approved or rejected. The carrier is looking for connections to brokerage processing facilities in other countries. The electronic links will be invisible to shippers, providing faster service with fewer errors.

The past decade has seen rapid changes in transportation and

distribution. No one doubts change will continue to be the norm. Shippers and service providers are constantly looking for ways to adapt to or benefit from those changes.

Carriers are broadening the types of services they offer, says Lisa Saunders, chairman of the executive committee of the National Small Shippers Traffic Council and director of physical distribution at C.B. Fleet. Long-haul LTL carriers are getting into regional hauling-CF has Conway, Roadway is buying regional carriers, Yellow Freight is soliciting both long haul and regional haul through the same system.

Carriers will continue to go out of business, Saunders predicts, prolonging the undercharge problem and causing continued equipment shortages, thus driving prices up. The certified driver requirement will have the same effect by shrinking the qualified driver pool.

Overnight's Whitener hears customers saying they need consistency; prompt, courteous, and action-filled responses; competitive pricing-but not to the point of adversely affecting the carrier's attitude toward service. " The message I get is that we need to put substance into our commitments toward total partnership, says Whitener. " None of us have all the answers." That being the case, everyone needs to work together to find optimal solutions to mutual problems. T&D

Special Features: illustration; photograph
Industry Codes/Names: TRAN Transportation, Distribution and Purchasing
Descriptors: Trucking--Services; Shipment of goods--Innovations
Product/Industry Names: 4210 Trucking & Courier Services, Ex. Air
File Segment: TI File 148

...into the low end of LTL with new services and rate structures. United Parcel Service (UPS) introduced Hundredweight Service, allowing shippers to save as much as 50% over standard rates if...

...to rate shop between LTL minimum charge carriers and weight-based parcel carriers such as UPS. He found no commercial system to meet his specifications but he did find a software...

...a payback of $1 to $1.5 million annually, from the system and from using UPS Hundredweight.

Because of the size of the company, Harshman says he could force LTL carriers...

...don't have to be Federal Express' largest shipper or even a major customer of UPS to benefit. Shipping systems can be beneficial to large or small companies through:

* Productivity improvements...

...options are, says Cross. Those options might include:

* Consolidation of LTL to pool point or UPS drop point.
* Consolidate shipments to build truck load (TL) shipments with stop-offs.
* Stop-off...the rate structure.

Clem Baumeister, traffic manager for retailer Things Remembered, switched his business from UPS to RPS when RPS offered an attractive discount. On the short haul, claims Baumeister, the two carriers are equal. Even though UPS now offers a comparable discount, Baumeister did not

switch 100% of his business back to UPS because RPS offers Collect Service (bill the consignee)-a service that meets the special needs...

...tied to a management information system so information entered once is available for inventory, printing labels or bar codes, billing, and more.

* RPS is another carrier cutting the paperwork associated with small shipments. The shipper is looking for one thing, says ...intend to be the leader."

* Quill Corp. ships approximately 16,000 small packages daily. With UPS Hundredweight Service, the company saves about 20% on shipments in the 250-lb to 500-lb range, according to Terry Schwarting, transportation manager. The UPS service includes inside delivery at no extra charge. Quill also saves on staging costs. Since UPS treats each parcel as an individual shipment, parcels going to the same location don't need to be unitized as in LTL shipments.

UPS' On Call Air Pickup, same day pickup service of express air packages sent via UPS, is available in a number of major cities. Look for the service to spread to others in the near future. Service goes global

UPS and other carriers also are spreading services beyond U.S. borders.

* Roberts Express is starting...

...IDS in the U.S. to include outbound shipments to foreign markets later this year.

* UPS has delivery networks in 180 countries. UPS's International Shipments Processing System (ISPS) speeds customs clearance by providing shipping information to customs agents in advance.

UPS has an electronic data link to the Canadian Customs Service. The carrier transmits to a...

?